

AGRISAFE FINAL CONFERENCE
Climate change: challenge for training of applied plant scientists
March 21–23, 2011

Programme

Climate change: challenge for training of applied plant scientists

AGRISAFE FINAL CONFERENCE

Venue: Mercure Hotel H-1013 Budapest, Krisztina körút 41-43, Hungary
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Web: www.agrisafe.eu, www.mgki.hu
Date: March 21–23, 2011

Programme

Monday March 21, 2011

9.00-11.30 *Arrival, registration and poster set up*

11.30 *Lunch*

Plenary session

Chairman István Láng

13.00 **József Pálinkás, President of the Hungarian Academy of Sciences,**
Opening welcome address

13.20 **Ottó Veisz, coordinator of the AGRISAFE project, Agricultural Research
Institute of the Hungarian Academy of Sciences, Martonvásár, Hungary**
The Agrisafe project

13.40 **László Bozó, Hungarian Meteorological Service, Hungary**
Climate change in central Europe: observations and model scenarios

14.10 **John R. Porter, Faculty of Life Sciences, University of Copenhagen,
Denmark**
Agronomy as the science of sustainable food production

14.40 **Nevena Alexandrova, FAO Regional Office for Europe and Central Asia**
*Agricultural research and biotechnologies: powerful tools in facing
global challenges. Experience in Europe and Central Asia*

15.00 *Coffee break*

You are warmly welcome

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Crop production for sustainable agriculture

Chairman **Tamás Németh**

15.30 **Peter Gregory, *Scottish Crop Research Institute, Scotland, UK***
Climate change and crop production: studies of attribution and adaptation in Northern Britain

16.00 **Zoltán Berzsenyi, T. Árendás, P. Bónis and G. Micskei, *Agricultural Research Institute, HAS, Martonvásár, Hungary***
Long-term effect of crop production factors on maize productivity in different years

16.20 **Michaela Havrlentova, L. Deáková, A. Žofajová, Š. Masár and P. Hozlár, *Plant Production Research Centre, Piestany, Slovakia***
Putative role of cell wall β -D-glucan in oat grain exposed to thermal stress

16.40 **Jelena Postic, J. Cosic, K. Vrandecic and V. Tadic, *Agricultural Institute Osijek, Croatia***
Climate change and plant disease development

17.00 *Coffee break*

Chairman **John R. Porter**

17.30 **Frank A. Ewert, *Institute of Crop Science and Resource Conservation, University of Bonn, Germany***
Climate change impacts on crop production and options for adaptation at multiple scales

18.00 **Tamás Németh, *Hungarian Academy of Sciences, Hungary***
Role of soils in sustainable crop production

18.30 **Stephanie Franck, *PZO-Pflanzenzucht, Oberlimpurg, Germany***
Climate change adaptation strategy of a small breeding company

19.00 *Dinner*

20.00 **Poster session I.**

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Programme **Tuesday March 22, 2011**

Joint AGRISAFE – EUCARPIA Session

08.00 **Poster session II.**

Gene banks and genetic resources

Chairman **Zoltán Bedő**

09.00 **Andreas Börner, E.K. Khlestkina², S. Chebotar³, M. Nagel¹, M.A. Rehman-Arif¹, K. Neumann¹, B. Kobiljski⁴, U. Lohwasser¹ and M.S. Röder¹, ¹*Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany; ²Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russian Federation; ³South Plant Biotechnology Center, Odessa, Ukraine; ⁴Institute of Field and Vegetable Crops, Novi Sad, Serbia*
*Maintenance and exploitation of genetic resources for future plant breeding***

09.30 **Carlos Guzmán, L. Caballero, L.M. Martin and J.B. Alvarez, University of Cordoba, Spain**
Spanish hulled wheat: a good source of genetic resources

09.50 **Mian Abdur Rehman Arif, M. Nagel, U. Lohwasser and A. Börner, Leibniz Institute of Plant Genetics and Crop Plants, Gatersleben, Germany**
Long-term seed storability in genebank collections – genetic studies in wheat.

10.10 **Márta Láng-Molnár¹, É. Szakács¹, K. Kruppa¹, G. Linc¹, A. Cseh¹, I. Molnár¹, A. Farkas¹, S. Dulai², É. Darkó¹ and B. Hoffmann³, ¹*Agricultural Research Institute, HAS, Martonvásár, Hungary; ²Department of Plant Physiology, Faculty of Sciences, Eszterházy Károly College, Eger, Hungary; ³Department of Plant Sciences and Biotechnology, Georgikon Faculty, Pannon University, Keszthely, Hungary,*
*Production and characterization of wheat-barley introgression lines***

10.30 *Coffee break*

Breeding tools for biotic stress resistance

Chairman **Peter Ruckenbauer**

11.00 **Beat Keller, Institute of Plant Biology, University of Zurich, Zurich, Switzerland**
Is natural evolution providing enough diversity for wheat resistance breeding?

11.30 **Hermann Buerstmayr, Department for Agrobiotechnology (IFA-Tulln), Institute for Biotechnology in Plant Production, Tulln, Austria**
Breeding for improved Fusarium head blight resistance in wheat

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12.00 Mariana Ittu¹, L. Cana² and G. Ittu¹, ¹*Breeding Department, National Agricultural Research Development Institute, Fundulea, Romania;* ²*Plant Protection Department, National Agricultural Research Development Institute, Fundulea, Romania*
Impact of climate change on wheat/pathogen interactions and on breeding for host resistance

12.20 Yana R. Sindarovska¹, O. I. Lozova², L. V. Yuzvenko², L. F. Didenko² and N. Y. Spivak², ¹*Institute of Cell Biology and Genetic Engineering NAS of Ukraine,* ²*D.K. Zabolatny Institute of Mikrobiology and Virology, NAS of Ukraine*
Ribonuclease activity of uninfected and infected plants of buckwheat varieties

12.40 *Lunch*

Breeding tools for abiotic stress resistance

Chairman Andreas Börner

14.00 Dénes Dudits¹, J. Györgyei¹, G. V. Horváth¹, I. Vass¹ and J. Pauk², ¹*Institute of Plant Biology, Biological Center, Szeged;* ²*Cereal Research Nonprofit Ltd., Szeged, Hungary*
From gene discovery to complex phenotyping in improving drought adaptation of cereals

14.30 Roberto Tuberosa and S. Salvi, *University of Bologna, Bologna, Italy*
Improving abiotic stress tolerance via marker-assisted approaches

15.00 Kerstin Neumann¹, A. F Balint², F. Szira², M. Baum³, R. K. Varshney⁴ and A. Börner¹, ¹*Leibniz Institute of Plant Genetics and Crop Plants, Gatersleben, Germany;* ²*Agricultural Research Institute, HAS, Hungary;* ³*International Center for Agricultural Research in the Dry Areas, Aleppo, Syria;* ⁴*International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India*
Genome-wide association mapping for early and late drought tolerance in a diverse barley collection

15.20 Balázs Tóth, I. Vashegyi, Z. Tóth, E. Sebestyén, V. Soós and G. Galiba, *Agricultural Research Institute, HAS, Martonvásár, Hungary*
Calcium dependence of cold-regulated genes

15.40 Anikó Stagel, ROCHE, Hungary
Next generation sequencing tools in plant breeding

16.30 Visit to the Agricultural Research Institute of the Hungarian Academy of Sciences, Martonvásár

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Wednesday March 23, 2011

08.00 **Poster session III.**

Interaction between plants and the environment

Chairman **Beáta Barnabás**

09.00 **Hans-Joachim Weigel, *Federal Research Institute for Rural Areas, Braunschweig, Germany***

Crop responses to future atmospheric CO₂ concentrations

09.30 **Balázs Barna, A. Bittsánszky, O. Viczián, L. Király, J. Fodor, G. Gullner, T. Kőmíves and Z. Király, *Plant Protection Institute, HAS, Hungary***

Biotic and abiotic stress tolerant plants with elevated antioxidant capacity

09.50 **Maksym Danchenko^{1,2}, K. Klubicova¹, L. Skultety³, V. Berezhna², N. Rashydov² and M. Hajduch¹, ¹*Institute of Plant Genetics and Biotechnology, SAV, Nitra, Slovakia; ²Institute of Cell Biology & Genetic Engineering, NASU, Kiev, Ukraine; ³Institute of Virology, SAV, Bratislava, Slovakia***

Concept of crop adaptation to the Chernobyl environment based on proteomic data

10.10 **Gábor Galiba^{1,2}, A. Vágújfalvi¹, I. Vashegyi^{1,2}, A. Soltész¹, E.J. Stockinger³, J. Dubcovsky⁴ and G. Kocsy¹, ¹*Agricultural Research Institute, HAS, Martonvásár, Hungary; ²Faculty of Information Technology, University of Pannonia, Veszprém, Hungary; ³Department of Horticulture and Crop Science, The Ohio State University, Wooster, USA; ⁴Department of Plant Sciences, University of California, Davis, USA***

Interaction between cold acclimation, frost tolerance and flower initiation in wheat

10.30 **Éva Darkó, H. Ambrus, A. Szenzenstein and B. Barnabás, *Agricultural Research Institute, HAS, Martonvásár, Hungary***

Responses of photosynthesis to cold stress in DH maize lines tolerant of oxidative stress

10.50 ***Coffee break***

Chairman **Ervin Balázs**

11.20 **John Sadler¹, J. M. Baker² and C. Ringler³, ¹*ARS USDA, Columbia, Missouri, USA; ²USDA-ARS St Paul MN, USA; ³IFPRI, Washington DC, USA***

Implications of climate change for water surplus and scarcity and how that affects agricultural sustainability in Hungary

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- 11.50** Szilvia Bencze, Z. Bamberger, T. Janda, K. Balla and O. Veisz,
Agricultural Research Institute, HAS, Martonvásár, Hungary
Changes in crop physiological parameters in a water-deficient environment
- 12.10** Oksana Sytar^{1,2}, A.M.M. Gabr³, I. Smetanska^{2,3} and A. Kosyan¹,
¹Department of Methods of Food Biotechnology, Berlin University of Technology, Institute of Food Technology and Food Chemistry, Berlin, Germany; ²Department of Plant Physiology and Ecology, Taras Shevchenko National University of Kiev, Ukraine; ³Department of Plant Biotechnology, National Research Center, Cairo, Egypt.
Pigments, phenolic contents and antioxidant activity of buckwheat seedlings under in vivo and in vitro conditions
- 12.30** Vilmos Soós¹, E. Sebestyén¹, A. Juhász¹, M. E. Light², L. Kohout³, M. Posta³, G. Szalai¹, J. V. Staden² and E. Balázs¹, *¹Agricultural Research Institute, HAS, Martonvásár, Hungary; ²Research Centre for Plant Growth and Development, School of Biological and Conservation Sciences, University of KwaZulu-Natal Pietermaritzburg, Scottsville, South Africa; ³Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic*
The effect of smoke-derived KAR1 on seed germination and its interplay with the inhibitory compound 3,4,5-trimethylfuran-2(5H)-one
- 12.50** Zoltán Bedő, Agricultural Research Institute, HAS, Martonvásár, Hungary
Closing remarks
- 13.00** *Lunch*