

ENHANCED GENEPOOL UTILIZATION



Capturing
wild relative and
landrace diversity
for crop improvement

Cambridge, UK
16–20 June 2014

Programme

DAY 01

Monday, 16 June 2014

Main location NIAB Innovation farm

- 14.00–16.00** REGISTRATION
- 15.00–17.00** Visit INIAB Innovation Farm – demonstration plots
- 17.30–19.30** OPENING SESSION – Welcome address and guest lecture
- 17.30–18.00** Opening session and welcome addresses
CEO NIAB, Tina Barsby
Bioversity International, Stephen Weise
EUCARPIA, Beat Boller
European Commission, Ciaran Mangan
DEFRA, Julian Jackson
- 18.00–19.00** Guest lecture – Jean Christophe Glaszmann
- 19.30–21.00** Welcome reception

DAY 02

Tuesday, 17 June 2014

*Main location Churchill College,
University of Cambridge*

- 8.30–9.00** REGISTRATION (and poster placement)

THEME I – Characterization Techniques to identify traits and expedite plant breeding

Pre-breeders' use of exotic germplasm

Chair

Jan Leendert Harrewijn

9.00–9.30

Keynote, **Dani Zamir**
“Geno-Pheno in plant breeding”

9.30–9.45

“Using Phenomics and Genomics to unlock landrace and wild relative diversity for crop improvement”
Koen Pelgrom, Garima Sharma, Roeland Voorrips, Colette Broekgaarden, Jeremy Pritchard, Sean May, Stanley Adobor, Bart Janssen, Wilbert van Workum, Brian Ford-Lloyd and **Ben Vosman**

- 9.45–10.00 “Pre-domesticating wild relatives as new sources of novel genetic diversity” **Duane Falk**
- 10.00–10.15 “Buglossoides; its journey to becoming *Ahi Flower*” **Lydia Smith** and Steven Bentley
- 10.15–10.30 “Unraveling quinoa domestication with wild ancestors” **Daniel Bertero** and Adriana Alercia
- 10.30–11.00 COFFEE / TEA

Breeders' use of exotic germplasm

- Chair** Ben Vosman
- 11.00–11.30 Keynote, **Mathias Lorieux** “Gene discovery and its applications in rice”
- 11.30–11.45 “The IBERS Diploid Avena Genomics Resource (DAGR) and its application to hexaploid oat breeding” **Tim Langdon**, Rob Vickerstaff, Catherine Howarth, Matt Hegarty, Ian Thomas and Athole Marshall
- 11.45–12.00 “Screening wild *Vigna* species and cowpea (*Vigna unguiculata*) land races for sources of resistance to *Striga gesnerioides*” **Olaniyi Ajewole Oyatomi**, Christian Fatokun, Boukar Ousmane, Michael Abberton and Christopher Ilori
- 12.00–12.15 “QTL detection for root-related traits in wild barley introgression lines under drought stress conditions” **Md. Arifuzzaman**, Ali Ahmad Naz and Jens Léon
- 12.15–12.30 Q&A
- 12.30–14.00 LUNCH AT CHURCHILL COLLEGE

Novel characterization techniques

- Chair** Brian Ford Lloyd
- 14.00–14.30 Keynote, **Ken Street** “How the Focused Identification of Germplasm Strategy (FIGS) is used to mine plant genetic resource collections for adaptive traits”
- 14.30–14.45 “Detecting climate adaptations in the wild pearl millet *Cenchrus americanus* for future breeding use” **Cécile Berthouly-Salazar**, Jean-Baptiste Floch, Marie Couderc and Yves Vigouroux
- 14.45–15.00 “Comparative population genomics in crops and their wild relatives : assessing the impact of domestication on crop” **Jean-Louis Pham**
- 15.00–15.15 “Next-generation SNP genotyping platforms for characterizing potato germplasm” **David De Koeyer**, Katheryn Douglass, Martin Lague, Benoit Bizimungu, Agnes Murphy, Merideth Bonierbale and Teresa Mosquera
- 15.15–15.30 Q&A
- 15.30–16.00 COFFEE / TEA

THEME II – Conservation Strategies (Part I)

International CWR conservation

- Chair** José Iriondo
- 16.00–16.30 Keynote, **Nigel Maxted** “Joining up the dots: a systematic perspective on crop wild relative conservation and use”

- 16.30–16.45 “A regional conservation strategy for European crop wild relative diversity” **Shelagh Kell**, José Iriondo, Joana Magos Brehm, Claire Harris, Brian Ford-Lloyd and Nigel Maxted
- 16.45–17.00 “Developing strategies for in situ crop wild relative conservation on a global scale” **Holly Vincent**, Nora Castañeda-Alvarez and Nigel Maxted
- 17.00–17.15 “The distributions and ex situ conservation of crop wild relatives: a worldwide approach” **Nora Castañeda-Alvarez**, Colin Houry, Chrystian Sosa, Vivian Bernau, Harold Achicanoy, Holly Vincent, Andy Jarvis and Nigel Maxted
- 17.15–17.30 “The GRIN-Taxonomy crop wild relative inventory” **John Wiersema** and Blanca León
- 17.30–18.00 POSTER SESSION – Theme I
- 19.30 World Food Party at NIAB Innovation farm

DAY 03

Wednesday, 18 June 2014

Main location Churchill College, University of Cambridge

- 8.30–9.00 POSTER SESSION – Theme II

International landrace conservation

- Chair** Nigel Maxted
- 9.00–9.30 Keynote, **Hugo Perales Rivera** “Landrace conservation, farmers and crop evolution”
- 9.30–9.45 “Towards a European on-farm conservation strategy for landraces” **Valeria Negri**, Nigel Maxted, Renzo Torricelli and Maarit Heinonen
- 9.45–10.00 “The use of spontaneous sexually-produced new landraces of a vegetatively propagated crop of the Andes (*Oxalis tuberosa* Mol.) to enhance in situ conservation” **Maxime Bonnave**, Thomas Bleeckx, Franz Terrazas and Pierre Bertin
- 10.00–10.15 “The Chirapaq Ñan Initiative: establishment of a long-term on-farm monitoring network for potato landrace diversity” **Stef de Haan**, Severin Polreich, Henry Juarez, Flor Rodriguez, Raul Ccanto, Carmen Alvarez, Milton Pinto, Sergio Moreira, Carlos Venegas and Julio Kalazich
- 10.15–10.30 Q&A
- 10.30–11.00 COFFEE / TEA

THEME III – Facilitating CWR and LR use

Community based conservation/use

- Chair** Lothar Frese
- 11.00–11.30 Keynote, **Maryam Rahmanian** “Rapidly increasing on-farm biodiversity through Evolutionary Plant Breeding: the Iranian experience”
- 11.30–11.45 “Conservation and utilization of genetic resources and heritage as a concept of rural sustainable economic development” **Vladislav Ognjanov**, Mirjana Ljubojevic, Dusica Bosnjakovic and Goran Barac

- 11.45–12.00** “Payments for Agrobiodiversity Conservation Services: Towards an instrument for environmentally effective, cost-efficient and socially equitable agrobiodiversity conservation” **Adam Drucker**, Ulf Narloch, Unai Pascual, Milton Pinto, Wilfredo Rojas, Jose Luis Soto Mendizabal and Enrique Valdivia
- 12.00–12.30** Q&A
- 12.30–13.30** LUNCH AT CHURCHILL COLLEGE

Visit to John Innes Centre

Leaving at 13.30

- 15.30–16.00** COFFEE / TEA
- 16.00–17.30** Welcome to JIC and JIC Lectures by Mike Ambrose, Chris Ridout, Brande Wulff and Adrian Turner
- 17.30–18.45** JIC Tour of the Growing Demonstrations of Wheat Evolution, Aegilops species and *Pisum* Diversity
- 19.00** Return to Cambridge
Free evening

DAY 04

Thursday, 19 June 2014

Main location Churchill College, University of Cambridge

- 8.30–9.00** POSTER SESSION – Theme III and IV

Improving breeders' access to PGRFA

- Chair** Beat Boller
- 9.00–9.30** Keynote, **Lisanne Boon** “Improving breeders' access to PGRFA”
- 9.30–9.45** “Ways to unlock barley's secondary gene pool for breeding with Next-Generation-Sequencing” **Neele Wendler**, Martin Mascher, Christiane Noeh, Axel Himmelbach, Uwe Scholz, Brigitte Ruge-Wehling and Nils Stein
- 9.45–10.00** “Wild *Lactuca saligna* richness for lettuce breeding” **Eva Kristkova**, Ales Lebeda, Miloslav Kitner, Ivana Dolezalova, Barbora Mieslerova, Irena Petrzelova and Alex Beharav
- 10.00–10.15** “A new selection tool to exploit genetic resources in durum wheat” **Domenico Pignone**, Domenico De Paola, Nicoletta Rapanà and Michela Janni
- 10.15–10.30** “The use of crop wild relatives in public international breeding centers and implications for conservation” **Chelsea Smith**
- 10.30–11.00** COFFEE / TEA

PGRFA conservation/use policy

- Chair** Ehsan Dulloo
- 11.00–11.30** Keynote, **Michael Halewood** “Are we almost there yet? A backseat view of the 50 year voyage to develop international systems for PGRFA conservation and use”

- 11.30–11.45** “On the conservation and sustainable use of plant genetic resources in Europe: a stakeholder analysis” Lothar Frese, **Anna Palmé** and Chris Kik
- 11.45–12.00** “Towards an improved European Plant Germplasm System” **Lothar Frese**, Anna Palmé, Lorenz Bülow and Chris Kik
- 12.00–12.15** “Impact of the genetic resources policy landscape on food security” **Eva Thörn**, Carl-Gustaf Thornström and Ivar Virgin
- 12.15–12.30** “The strategic action plan to strengthen the conservation and use of Mesoamerican plant genetic resources in adapting agriculture to climate change (SAPM)” **Marleni Ramirez**, Gea Galluzzi, Maarten van Zonneveld, Evert Thomas, Jacob Van Etten, Carolina Alcazar, Marcela Beltran, Dimary Libreros and William Solano
- 12.30–14.00** LUNCH AT CHURCHILL COLLEGE

THEME IV – Informatics development

Characterization informatics

- Chair** Eva Thörn
- 14.00–14.30** Keynote, **Richard Finkers** “Plant Breeding Data Management, Analysis, and Integration”
- 14.30–14.45** “New predictive characterization methods for accessing and using CWR diversity” **Imke Thormann**, Mauricio Parra-Quijano, Jose M. Iriondo, María Luisa Rubio-Teso, Dag Terje Endresen, Sónia Dias, Jacob van Etten and Nigel Maxted
- 14.45–15.15** “Plant Genetic Resources Diversity Gateway – a way forward” **Sónia Dias**, Milko Skofic, Ehsan Dulloo and Nigel Maxted
- 15.15–15.30** Q&A
- 15.30–16.00** COFFEE / TEA

Conservation Informatics

- Chair** Sean May
- 16.00–16.30** Keynote, **Theo van Hintum** “Information technology to assist in conserving and using crop wild relatives and landrace diversity”
- 16.30–16.45** “CAPFITOGEN tools. Facilitated spatial and ecogeographical germplasm analysis for efficient PGR conservation and utilization” **Mauricio Parra Quijano**, Francisco López, María Elena Torres and José Iriondo
- 16.45–17.00** “Thoughts and experiences building an *in situ/ex situ* information system” Sónia Dias and **Milko Skofic**
- 17.00–17.15** “Implementation of a PGR Global Documentation system in Portugal” **Ana Maria Barata**, Filomena Rocha, João Oliveira, José Lima, Humberto Nobrega, Miguel Pinheiro Carvalho and Sónia Dias
- 17.15–17.30** “What do we have to lose? Generating crop diversity and threat monitoring information to support poor farmer livelihoods and public good ecosystem services” Adam Drucker and **Ehsan Dulloo**
- 17.30–18.00** Closed session – EUCARPIA MEMBERS
- 17.30–19.30** FREE TIME
- 19.30** Conference dinner at St. John's College

DAY 05

Friday, 20 June 2014

Main location Churchill College, University of Cambridge

THEME II – Conservation Strategies (Part II)

National CWR Conservation

Chair	Shelagh Kell
8.30–9.00	Keynote, José Iriondo “National Strategies for the Conservation of CWR”
9.00–9.15	“Developing methodologies for the genetic conservation of UK crop wild relatives” Hannah Fielder , Julian Hosking, Peter Brotherton, Julian Woodman, Cécile Smith, John Hopkins, Brian Ford-Lloyd and Nigel Maxted
9.15–9.30	“Optimized site selection for the <i>in situ</i> conservation of forage and fodder CWRs: a combination of community and genetic level perspectives” María Luisa Rubio Teso , Kurodo Kinoshita Kinoshita and José M. Iriondo Alegría
9.30–9.45	“Crop wild relatives, a conservation priority for Jordan” Joana Magos Brehm , Hatem Taifour, Sobhia Saifan and Nigel Maxted.
9.45–10.00	“Development of the national crop wild relative <i>in situ</i> conservation strategy for Lithuania” Juozas Labokas , Bronislovas Gelvonauskis, Birute Karpaviciene and Vilma Kemesyte
10.00–10.15	“Priorities and strategies for conservation of crop wild relatives at Indian National Genebank” Veena Gupta
10.15–10.30	Q&A

(Parallel session)

National LR Conservation

Chair	Valeria Negri
8.30–9.00	Keynote, Abishkar Subedi “Landraces, Livelihood, and Community Biodiversity Management”
9.00–9.15	“Landrace inventories and conservation strategy making in Finland” Maarit Heinonen , Kristiina Antonius, Hilma Kinnanen, Ritva Valo
9.15–9.30	“Assessment of Italian LR density and species richness: useful criteria for developing <i>in situ</i> conservation strategies” Renzo Torricelli , Luca Pacicco, Mara Bodesmo, Lorenzo Raggi and Valeria Negri
9.30–9.45	“Using landraces in agriculture, food and cooking: the experience around a big city in Southern Europe” Almudena Lázaro , Isabel Fernández and Cristina de Lorenzo
9.45–10.00	“Hungarian strategies for the conservation of crop wild relative (CWR) and landrace (LR) diversity” Borbala Baktay
10.00–10.15	“Crop wild relatives and landraces of Jordan: their integration to food security programs” Basma Ali, Sobhia Saifan , Tariq Abu Taleb, Joana Magos Brehm, Nigel Maxted, Fawzi Elsheyab and Barbara Dingwall
10.15–10.30	“Regeneration and conservation of chickpea genetic resources of Georgia” Avtandil Korakhashvili

10.30–11.00 COFFEE / TEA

Round table discussion “VISION of future European PGRFA conservation/use”

Chair	Nigel Maxted
11.00–12.30	Panel discussion
12.30–13.00	Closing session - EUCARPIA, NIAB, PGR Secure, Bioversity International
12.30–13.30	Pick up packed lunch
13.30	Departure to Minsmere nature reserve
15.30–19.30	Minsmere nature reserve visit and dinner by the sea Return to Cambridge



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