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EUCARPIA

European Association for Research on Plant Breeding
Europäische Gesellschaft für Züchtungsforschung
Association Européenne pour l'Amélioration des Plantes

March 2016

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EUCARPIA European Association for Research on Plant Breeding
Europäische Gesellschaft für Züchtungsforschung
Association Européenne pour l'Amélioration des Plantes

EUCARPIA aims at promoting scientific and technical co-operation in the field of plant breeding in order to foster its further development. To achieve this purpose, the Association arranges and sponsors meetings of its members to discuss general or specific problems. Each year, EUCARPIA organizes open conferences and colloquia throughout Europe. Founded at Wageningen (The Netherlands) in 1956 as a non-profit organization, EUCARPIA has made considerable contributions to improving international contacts in plant breeding research. EUCARPIA has 11 sections and a number of working groups active in specific fields of interest.

EUCARPIA has individual members (qualified scientists in the field of plant breeding) and corporate members (research institutes, breeding stations, associations, societies etc.). A corporate membership is a collective membership for at most 10 persons.
To become a member of EUCARPIA, visit our website www.eucarpia.org and register online.

Membership fees*:	individual members	€ 40.--
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*Special reduced rates apply for members from some countries, see page 23

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PRESIDENTIAL ADDRESS

The year 2016 is my fourth and last in the function of EUCARPIA president. I am happy to say that EUCARPIA is vibrantly alive and keeps being a widely recognised international platform for the exchange of knowledge, experience and technology in the field of plant breeding, connecting basic plant science, applied research, practical plant breeding and stakeholders of seed production and marketing in a world-wide unique fashion. Our crop specific and thematic sections are well-organised sub-units with strong activities of their own. In 2015, Section or Working Group meetings were held in no less than 9 out of our 11 sections. I thank all section leaders and organisers of these meetings for their commitment and efforts and I keep good memories of those I was able to attend. Some innovative elements were added to the different programs, such as the competitive flash presentations at the Fodder Crops and Amenity Grasses Section meeting in Belgium, which stimulated attention to the presentations and offered new possibilities of direct contact and exchange with the authors. Offering such networking possibilities is our main task, and I am convinced that regular meetings with their varied scientific and social programs will remain an invaluable opportunity to initiate and strengthen cooperation across national borders and various disciplines – even in the era of digital networks at all levels. From this point of view, continuity in the work of the EUCARPIA sections is vital for our association. All our sections and working groups are chaired by highly motivated leaders. Most of them are supported by a substitute and a section board, thus ensuring the long-term functioning of the section. Great thanks to all of you who are willing to commit yourself to promoting the spirit of EUCARPIA and its sections.

This year is marked by the General Congress to be held 29 August to 1 September 2016 in Zurich, Switzerland under the motto "Plant breeding – the art of bringing science to life". It will be the 20th congress since the foundation of EUCARPIA in 1956. The scientific programme is varied and attractive, with 11 renowned invited speakers and a focus on application of cutting-edge new techniques to meet the great challenges plant breeding faces due to global change and the need to keep pace with the increasing demand for food. The current state of registrations and submissions of contributions promises a good attendance. Visit www.eucarpia2016.org or read the respective paragraph in this bulletin to get more information. I hope seeing many of you in Zurich soon!

During my term as EUCARPIA president, I feel that public recognition of the achievements and the potential of plant breeding as a key element to cope with the threats to the future of our planet has improved. Fears that a monopolisation of the new plant breeding techniques would lead to an unwanted and dangerous dominance of multinational companies in the sensitive seed and food sector are less prominent than a few years ago. It is more widely recognised that co-ordinated efforts at all levels are necessary to achieve the ambitious goal of providing sufficient and healthy food to a growing world population. The role of plant breeding in these efforts appears in a more positive light, the need of progress becomes appreciated better, and public bodies are more willing to take initiatives to improve the general conditions for plant breeding. These are encouraging signals for the plant breeding community and an incentive for us EUCARPIA to continue our mission of building bridges between theory and application of the most promising technologies for the plant cultivar of the future!

The General Congress later this year will end with an open discussion on the session topic "Facilitating access to germplasm and release of innovative cultivars", and future EUCARPIA president Richard Visser will set the stage with a lecture on "Innovation vs. regulation – Maintaining biodiversity and breeding innovative cultivars". I look forward to this special event. It will also mark the transition in EUCARPIA presidency and I am pleased to know our association in good hands in the coming years.

Beat Boller

EUCARPIA President

SECTION REPORTS

a. Potatoes

The 18th Joint Section Meeting of EUCARPIA Section Potatoes and the EAPR Breeding and Varietal Assessment Section took place in the Italian coastal town of Vico Equense on the Sorrento Peninsula near Naples between the 15th and 18th of April 2015. The venue, Hotel Aequa, provided a stunning view of Mt Vesuvius for just over 100 delegates who travelled from twenty-five different countries in order to attend. Attendees from the USA, Uruguay, Colombia, South Africa, Tunisia, Australia and New Zealand joined the delegates from continental Europe to continue the longstanding tradition of section meetings with a truly international outlook. I'd like to congratulate Domenico Carputo and his local organising committee for organising an excellent, affordable meeting that combined a great scientific programme with feeling of intimacy that encouraged a lot of interaction between the participants.

The scientific programme took place over three days, with six keynote addresses and thirty-three oral presentations divided into sessions on biotic interactions, quality traits, abiotic stresses, and diversity breeding and selection. I came away from the meeting feeling that the potato genetics and breeding research community is developing an increasingly deep understanding of the interaction of potato with biotic and abiotic stresses, and that these insights can be combined with advanced breeding methodologies, such as hybrid breeding, marker-assisted and genomic selection and cisgenics to develop resilient, high quality potato varieties that will be central to both high value agricultural production and food security in the uncertain and changeable environment we face in the future.

The meeting featured a special session to mark the retirement of Dr Christiane Gebhardt. This session began with a very nice retrospective of Christiane's career by long-time colleague Prof. Francesco Salamini, and ended with a keynote address from Christiane, summing up the results of three decades of potato genetic and molecular research in her group. In her talk, Teresa Mosquera highlighted Christiane's commitment to the development of young scientists, and co-chair Glenn Bryan thoughtfully continued this theme when, between presentations, he gave the assembled audience a chance to share their experiences of working and interacting with Christiane. On behalf of Section Potatoes, I'd like to take this opportunity to thank Christiane for her contribution to the Joint Section meeting series. Since I started attending these meetings, the presence of Christiane, and her postdoctoral scientists and students, has enriched the scientific content of the meetings. Her specific emphasis on applying molecular genetics to the advancement of potato breeding that is very much in the spirit of the goals of EUCARPIA. We wish her the best in her retirement.

Our sister Section (EAPR Breeding and Varietal Assessment Section) bid farewell to Finlay Dale, and elected Sylvie Marhadour as their next chairperson, and I'd like to extend to her the congratulations of EUCARPIA Section Potatoes. In a similar vein, I'd like to announce that I intend to step down as chairperson of Section Potatoes at the next EUCARPIA congress. It's been a pleasure to help organise the last several Joint Section meetings, and I'd like to thank EUCARPIA and EAPR members for their kind support over the last several years. A new Section Chairperson will be elected/appointed at the General Congress – please submit nominations to me via email in the intervening period.

Finally, Klaus Dehmer and Vanessa Prigge have kindly volunteered to organise the next Joint Section Meeting in northern Germany in 2018. I hope that you continue to lend you support to this meeting series by attending, and making the next meeting as successful and interesting as Vico Equense!

Dan Milbourne, Section Chairperson, dan.milbourne@teagasc.ie

b. Cereals

There was no periodical Section Meeting in 2015, however several conferences were organised jointly with the Cereals Section of EUCARPIA.

EWAC - EUCARPIA Cereals Section Conference
From May 24 – 29, 2015 the joint EWAC (The European Cereals Genetics Co-operative) -EUCARPIA Cereals Section Conference took place in Lublin, the main scientific and cultural center in Eastern Poland. EWAC - formerly standing for "European Wheat Aneuploid Co-operative" is a platform for researchers developing and using cereal stocks for genetic studies employing molecular techniques. EWAC co-ordinates and promotes the development of new precise genetic stocks as well as the exploitation of existing ones built up over five decades of research. Forty-seven participants from 14 countries came to Lublin in order to discuss their recent results on cereals genetics.

During the conference 20 oral and 24 poster presentations were provided during four sessions:

- EWAC – The Story of Successful Cooperation
- Genetic Diversity *vs.* Plant Breeding
- Trait Evaluation and Genetic Mapping
- Wide Crosses, Physiology and Adaptation

In addition a workshop was organized by the Global Crop Diversity Trust entitled: 'The Expert Working Group on Wheat Genetic Resources'.
At the business meeting of the conference the participants discussed the possibility that EWAC may get the status of an EUCARPIA Working Group within the Cereals Section of the Association. It was agreed to use the EUCARPIA platform to increase the visibility of EWAC. Head and Deputy Head of the new Working Group will be Andreas Börner (Germany) and Tatyana Pshenichnikova (Russia), respectively. Sylwia Okoń (Poland) volunteered to become the Secretary.
For the next EWAC - EUCARPIA Cereals Section Conference three offers were made: Belarus, Bulgaria and Romania. After voting of the participants a clear decision was made for Romania (Fundulea).

International Conference on Rye Breeding and Genetics - Rye Working Group of the EUCARPIA Cereals Section

The International Conference on Rye Breeding and Genetics organized under the umbrella of the Rye Working Group of the EUCARPIA Cereals Section was held at the Wrocław University of Environment and Life Sciences in Wrocław, Poland from June 24 – 26, 2015. It was the 10th Conference in this series. It was attended by 81 participants from 10 countries. In total 26 lectures and 44 posters were presented in the following seven sessions:

- Thirty years of hybrid rye cultivars
- General breeding methods
- Genomic prediction and selection
- Emerging molecular tools
- Use of genetic resources and cytogenetics
- Disease resistance and tolerance to abiotic stresses
- Nutritional and technological quality

To combine science and practise a visit at the KWS LOCHOW POLSKA breeding station in Kondratowice was included.

The participants did agree that still a lot has to be done to improve rye germplasm according to new breeding goals, including drought tolerance, nitrogen efficiency, and feeding quality combined with a grain yield. A close cooperation of rye research and rye breeding will be a clue for solving these challenges.

The next conference of the Rye Working group was scheduled to be held in Germany in 2020.

Future meetings

The 9th International Triticale Symposium will be jointly organized by the the Cereal Research Non-Profit Ltd. (Szeged), the International Triticale Association, the Association of Hungarian Plant Breeders and the EUCARPIA Cereals Section in Szeged, Hungary, May 23-27, 2016.
Members of the International Organizing Committee are: Lajos Bona (Hungary), Janos Pauk (Hungary), Zoltan Bedo (Hungary), Geert Haesaert (Belgium), Veerle Derycke (Belgium), Edward Arseniuk (Poland), Sofia Banaszak (Poland), Andreas Börner (Germany), George Ittu (Romania), Annaig Boguennec (France), Dr. Ahmed Bagci (Turkey), Karim Ammar (Mexico), Rishi K. Behl (India), Williem Botes (South Africa), Richard Trethowan (Australia), Francois Eudes (Canada), Rawindra N. Chibbar (Canada) and Perry Gustafson (USA).
The main topics of the Symposium are:

- Genetics, biotechnology and breeding
- Crop management and agronomy research
- Physiology, abiotic- and biotic stresses
- Utilization of triticale – food and feed aspects
- Economy, marketing, and social aspects

Further information is accessible at the conference webpage: http://www.triticale.hu

Establishment of a new Working Group of the Cereals Section of EUCARPIA

Cereals Genetic Stocks (EWAC) Working Group

The European Cereals Genetics Co-operative (EWAC - formerly standing for 'European Wheat Aneuploid Co-operative') is to foster cooperative research in cereal genetics, cytogenetics, genomics and molecular biology across Europe. It has become an excellent platform for researchers developing and using precise cereal stocks for genetic studies including the localisation and mapping of genes/QTLs by employing molecular techniques.

The Co-operative was founded in 1966. During fifty years of history sixteen conferences took place in different countries, the latest one in Lublin, Poland, 24 – 29 June, 2015. During this conference the members of the organisation agreed that EWAC should get the status of an EUCARPIA Working Group within the Cereals Section. It was agreed that the Group will be headed by Andreas Börner (Germany). Deputy Head will be Tatyana Pshenichnikova (Russia) whereas Sylwia Okoń (Poland) will be the Secretary. In order to underline it's new status as a EUCARPIA working group, it is renamed "Cereals Genetic Stocks (EWAC) Working Group".

Main activities of the Working group:

- It coordinates and promotes the development of the new precise genetic stocks as well as the curation of existing genetic stocks built up over four decades of research. Importantly, it promotes their use through new cooperative activities to bring benefits to a wide range of stakeholders including plant breeders and ultimately, farmers.

- It encourages the participation of a wide range of groups across Institutes and Universities in Europe and the training and mentoring of young scientists in particular to enable them to become familiar with the huge range of cereal (particularly wheat, barley and rye) precise genetics stocks available for research.

This includes:

1) The prevention of duplicated effort in development of plant material

2) The exchange of information to ensure that the maximum benefit is derived

3) Free exchange of cytogenetically verified stocks

4) Joint work to be undertaken to develop new plant material

5) Co-operative study and testing of lines in a range of environmental conditions.

6) Arrangements for training in the techniques and application of genetic methods

For further information see the EWAC webpage www.ewac.eu or contact:

Andreas Börner, Section Chairperson, boerner@ipk-gatersleben.de

c. Fodder Crops and Amenity Grasses

1. The 31st Meeting of the Eucarpia Fodder Crops and Amenity Grasses Section was held in Ghent, Belgium from 13-17 September 2015. It was jointly organized by the Institute for Agricultural and Fisheries Research (ILVO) and Ghent University (UGent).

2. The topic of the meeting was "Breeding in a world of scarcity" referring to (i) the shrinking number of breeders, (ii) the changing environment, the reduced access to natural resources and the shrinking degrees of freedom in using them, (iii) the shrinking numbers of farmers, the scarcity of agricultural land and the shrinking degrees of freedom in using the land and (iv) the fading of focus in primary production triggered by ample consumer demands.

3. These topics were reflected in the four sessions of the meeting: scarcity of (i) natural resources, (ii) breeders, (iii) land and (iv) focus.

4. Two parallel workshops (genomic selection and association mapping; phenotyping) and two working groups (multisite rust evaluation; Festulolium) were organized.

5. The mid-conference tour was focused on breeding activities at ILVO and Ghent University completed with visits to grassland farms in the region that remembered scarcity during World War I of 100 years ago.

6. We have introduced new elements in the format of the meeting.

6.1 We had two debates: the breeding debate and the feeding value debate, addressing knowledge evolutions and future orientations in breeding methods and fodder quality importance and assessment.

6.2 We had no posters in the meeting, they were replaced by very short presentations and discussions with the authors afterwards.

6.3 We had awards for the best presentations and the best breeding ideas.

7. The geographic origin and numbers of delegates is presented in **Figure 1.**

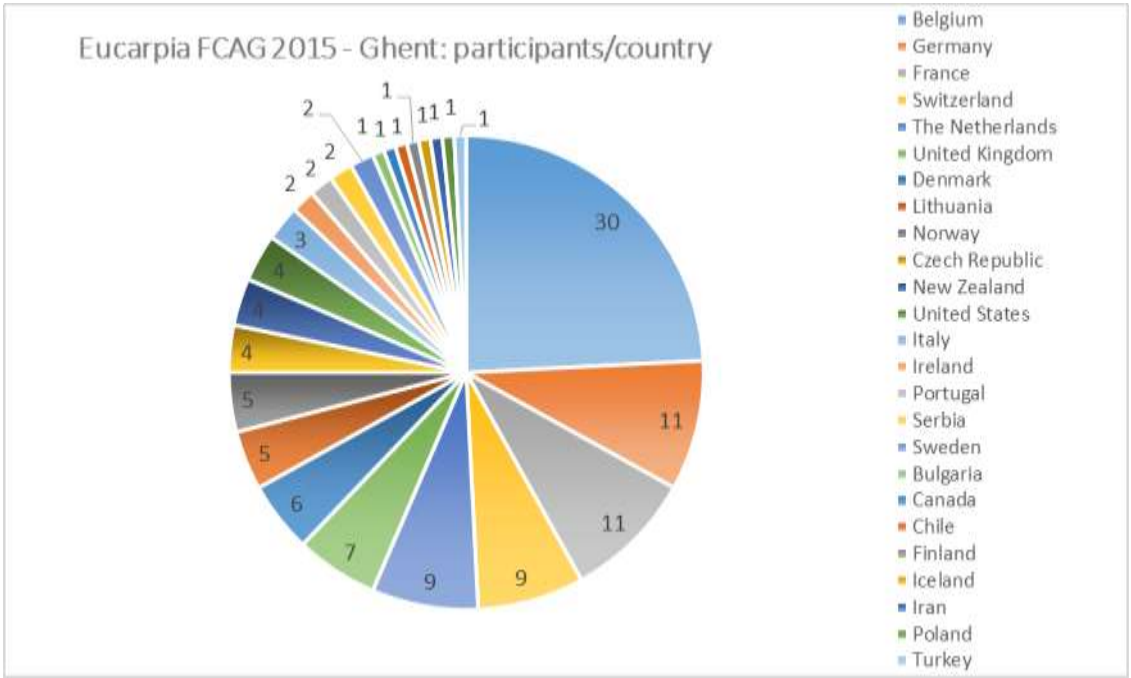


Figure 1. Participants into the 31st Meeting of the Eucarpia Fodder Crops and Amenity Grasses Section, Ghent (B), 13-17 September 2015.

Dirk Reheul, Section Chairperson, dirk.reheul@UGent.be

d. Biometrics in Plant Breeding

http://www.wageningenur.nl/en/activity/XVIth-Meeting-of-the-EUCARPIA-Section-Biometrics-in-Plant-Breeding.htm

The XVIth meeting of the Section Biometrics in Plant Breeding was held in Wageningen, The Netherlands, from 9 to 11 September 2015 at Hotel Wageningscheberg. There were 160 registered delegates. Apart from a very interesting scientific programme, there was ample opportunity for informal exchanges among the participants, including the very worthwhile mid-conference half-day excursions. The following topics were covered in the different sessions:
1. Genomic and marker assisted selection
2. Implementation of breeding strategies in public and private sector programs
3. Analysis and use of high throughput data in plant breeding (omics, NGS, phenotyping platforms)
4. Phenotypic data: Experimental design and analysis for single and multiple experiments
5. Exploitation of genetic resources

The following invited speakers gave talks at the meeting:

(1) Peter Visscher (Centre for Neurogenetics & Statistical Genomics, University of Queensland, Australia) - Genomics and big data in human populations: combining genetics and epigenetics to predict phenotypes;
(2) Neil Hausmann (Dupont Pioneer, United States) - Future breeding systems: view from DuPont Pioneer;
(3) John Hickey (University of Edinburgh, United Kingdom) - Sequence to phenotype: allocation of resources;
(4) Emma Huang (CSIRO Computational Informatics and the Food Futures National Research Flagship, Australia) - Meta-alleles in multiparental populations;
(5) Jens Riis-Jacobsen (CIMMYT) - Accelerate genetic gain by taking advantage of additional data sources and integrated data analysis – case studies from maize and wheat breeding at CIMMYT;
(6) Alison Smith (University of Wollongong, Australia) - Experimental designs for expensive multi-phase traits;
(7) Andres Gordillo (KWS) - Genomic selection strategies and validation in hybrid maize and rye;
(8) Hans Peter Piepho (Biostatistics Unit, Universität Hohenheim) - The generation of efficient row-column designs for field trials;
(9) Luc Janss (Aarhus University) - Genomic analysis in tetraploid potato using genotyping-by-sequencing;
(10) Dave Marshall (The James Hutton Institute) - The data challenges from the application of high throughput technologies in plant breeding and genetics;

(11) Marco van Schriek (Keygene) - Exploitation of digital phenotype markers for prediction of *Brassica napus* field seed yield.
We thank the local organizing team (Marco Bink - Chair, Marcos Malosetti, Roeland Voorrips, Daniela Bustos, Dinie Verbeek-Greeve) for arranging and managing this conference so excellently and making it a very enjoyable experience for everyone participating.

During the meeting, Hans-Peter Piepho was elected as the new Chair of the Section Biometrics in Plant Breeding. Fred van Eeuwijk, who did a wonderful job as Chair for the past 12 years, is thanked for his superb service to the Section.

Future meetings

The next meeting is planned for September 2018, and it will be held in Belgium.

Hans-Peter Piepho, Section Chairperson, Hans-Peter.Piepho@uni-hohenheim.de

h. Genetic Resources

Next section meeting
The next Genetic Resources section meeting will be held at Le Corum in Montpellier, France from 08–11 May 2017. The meeting will be hosted by the Agropolis Fondation, Institut de Recherche pour le Développement (IRD) and the local organization led by Jean-Louis Pham (Agropolis Fondation, IRD) and Anne Zanetto (UE DiaScope, INRA – L'institut National de la Recherche Agronomique). Further information will be circulated over the coming months. Please put the dates in your diaries!

Genetic Resources section board
A board has been established to guide the activities of the section, particularly with regard to the development of the scientific programme of the 2017 meeting. I would like to welcome the following section members to the board and Scientific Programme Committee of the meeting:

- Andreas Börner, Julius Kühn-Institut (JKI), Germany
- Willem Botes, Chair of South Africa Breeders' Association, University of Stellenbosch, South Africa
- Derly José Henriques Da Silva, Departamento de Fitotecnia, Universidade Federal de Viçosa, Brazil
- Lorenzo Maggioni, ECPGR Secretariat, Italy
- Olaniyi Ajewole Oyatomi, International Institute of Tropical Agriculture (IITA), Nigeria
- Anna Palme, NordGen, Sweden
- Beate Schierscher, Agroscope, Switzerland (section Vice Chair)
- Jelka Sustar-Vozlic, Agricultural Institute of Slovenia
- Theo van Hintum, Centre for Genetic Resources (CGN), The Netherlands

Global survey on sustainable use of PGRFA
In 2015, the Secretariat of the International Treaty launched an online consultation to gather the views and needs of stakeholders in the sustainable use of PGRFA. Results of the consultation allowed a clearer understanding of the 'bottlenecks' in the sustainable use system and a deeper comprehension of the constraints and needs regarding the implementation of the sustainable use provisions of the Treaty. In particular, it highlighted the critical need to address limitations regarding policy in support of sustainable use activities—both with respect to missing policies and problems with the implementation of existing ones—as well as capacity building needs in all areas of the PGRFA sustainable use spectrum. Further, the consultation emphasized that access to plant genetic material and associated information urgently needs to be addressed in order that countries can move ahead with the development of coordinated and comprehensive sustainable use strategies. Read the full report here: www.planttreaty.org/sites/default/files/gb6i03e.pdf.

Preparatory action on EU plant and animal genetic resources
The European Commission contracted project 'Preparatory action on EU plant and animal genetic resources' was launched in July 2014 for a period of two years with the objective of supporting the EU in recognizing the potentials for added value in the field of conservation and sustainable use of agricultural genetic resources. Specifically, the project aims to identify, describe, and analyse activities undertaken in the EU Member States regarding the conservation and sustainable use of agricultural and forest genetic resources, and to identify missing links and future actions needed. For further information, visit the project website: www.geneticresources.eu.

News from the ECPGR Secretariat
Lorenzo Maggioni, ECPGR Secretary
The European Cooperative Programme for Plant Genetic Resources (ECPGR) is implementing its Phase IX (2014–2018). The ECPGR EURISCO Catalogue of *ex situ* plant collections maintained in Europe (eurisco.ecpgr.org), now hosted and managed at the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany, provides accession-specific passport data for about 1.8 M accessions held in European genebanks and in 2016 it will start to also incorporate characterization and evaluation data. Thirty-four European countries are members of "A European Genebank Integrated System" (AEGIS) and 16 of them have currently designated over 28,000 accessions from Annex I and non-Annex I crops of the International Treaty to the European (AEGIS) Collection. These 'European Accessions' are available under the terms of the International Treaty (www.ecpgr.cgiar.org/aegis/european-collection). ECPGR regularly offers small grants for multilateral activities aimed at improving *ex situ* and *in situ* conservation and increasing utilization of Plant Genetic Resources for Food and Agriculture. The third call is open with a deadline 15 April 2016 (www.ecpgr.cgiar.org/funding-opportunities/ecpgr-activity-grant-scheme-third-call). The Steering Committee of ECPGR will hold its 14th (mid-term) meeting 31 May–2 June 2016 in Visegrad, Bosnia and Herzegovina, to

discuss progress and future directions. Special sessions will be dedicated to the relationship with the genetic resources strategy of the European Commission and to the implementation of the Nagoya Protocol in Europe. A representative of EUCARPIA (Genetic Resources section Chair), as permanent observer in the Committee, will be invited to the meeting.

News from section members

DIVERSIFOOD project

DIVERSIFOOD is an international project funded under the EU's Horizon 2020 Programme. By integrating existing networks across Europe, the project aims to strengthen the 'food culture' to achieve local high quality food systems. DIVERSIFOOD will evaluate and enrich the diversity of cultivated plants within diverse agroecosystems to increase their performance, resilience and quality through a multi-actor approach. By integrating existing experienced networks and using specific and relevant cases across Europe, the project will strengthen 'food culture' to improve the economic viability of local chains resulting in a greater diversity of produce with a cultural identity. For further information, visit the project website: www.diversifood.eu.

Crop Research Institute – Gene Bank, Prague, the Czech Republic

CRI is the coordinating body of the National Programme for the conservation and utilization of PGR and agrobiodiversity and the central genebank for conservation, characterization and evaluation of PGR in the Czech Republic. All passport and characterization data are well documented in the new documentation system GRIN Czech: https://grinczech.vurv.cz/gringlobal/search.aspx.

Collection of wild *Cicer* in Turkey

During the period 2013–2015, staff of the Department of Field Crops, Faculty of Agriculture, Akdeniz University, Antalya, Turkey collected several hundred samples of chickpea wild relatives *Cicer reticulatum* and *C. echinospermum*. Both species possess traits of potential use in crop improvement, such as tolerance of extreme temperatures and resistance to biotic stresses. For more information see: Toker, C., Berger, J., Kahraman, A., Aydogan, A., Can, C., Bukun, B., Penmetsa, R.V., von Wettberg, E.J. and Cook, D.R. (2014) *Cicer reticulatum* Ladizinsky, progenitor of the cultivated chickpea (*C. arietinum* L.). *Legumes Perspectives* 5: 26–27, http://ils.nsseme.com/assets/LegumPerspect5.pdf.

Shelagh Kell, Section Chairperson, s.kell@bham.ac.uk

i. Maize & Sorghum

Two joint meetings were organized in 2015 (see below). Alain Charcosset was elected chairman of the section, succeeding to Domagoj Šimić, chairman of the session since 2011.

JOINT MEETING of the sections (i) Maize and Sorghum and (ii) Cereals of Eucarpia - Recent progress in drought tolerance: from genetics to modelling
The conference was held in Montpellier on June 8th and 9th, 2015, in conjunction with the FP7 EU project DROPS, see agenda and talks at https://colloque.inra.fr/drought-tolerant_plants_2015. It gathered 305 participants from more than countries, with very high level presentations and lively scientific discussions.

XXIIIrd EUCARPIA Maize and Sorghum Conference - Genomics and Phenomics for Model-based Maize and Sorghum Breeding
The conference was held in Montpellier on June 10-11, 2015, with the support of the French Initiative Amaizing (http://www.amaizing.fr/), see agenda and talks at https://colloque.inra.fr/eucarpia-maize-sorghum-2015. It gathered 170 participants from 26 countries, with very high level presentations and lively scientific discussions.
It was followed by three parallel sessions on June 12th:
- Technical Session on Plant Phenotyping (common to drought tolerance conference)
- Working group on Maize Genetic Resources and Diversity
- Working group Sorghum Breeding

Together, the two meetings presented major advances in the field of genetics and selection for adaptation to environmental constraints.

Future meetings
The next meeting will be organized by Chris-Carolin Schoen in Germany, in 2018

Alain Charcosset, Section Chairperson, alain.charcosset@moulon.inra.fr

j. Vegetables

In EUCARPIA Section Vegetables, we have four workgroups: Tomato, Cucurbitaceae, Capsicum and Eggplant, Leafy Vegetables. Each workgroup organizes meetings once every three or four years. These meetings offer an excellent platform to bring together the public and private sectors involved in plant breeding, with the aim to address new scientific findings and novel technologies revolutionizing plant breeding.

In 2015, the VIII Leafy Vegetables workgroup meeting was held in San Pedro del Pinatar, Spain. Dr Carol Wagstaff (University of Reading, UK) and Dr. Maria Isabel Gil (CEBAS-CSIC, Spain) organized the scientific programme that facilitated communication and discussion related to all aspects of leafy vegetables quality, from breeding, to production, to postharvest handling (http://www.verticesur.es/congresos/EUCARPIA2015/index.php). There were about 110 registered attendants, with an important representation of breeding companies. A focused session led by industry representatives was organised to address key problems in leafy vegetable breeding and production. I would like to heartily thank again Dr Carol Wagstaff and Dr. Maria Isabel Gil for the well-done job!

In 2016, the Section Vegetables will organize two workgroup meetings:

a. The XI EUCARPIA Meeting of the Cucurbitaceae Workgroup will be held from 24 to 28 July, 2016 in Warsaw, Poland by Prof. Elzbieta U. Kozik. http://www.inhort.pl/en/cucurbit2016
b. The XVI EUCARPIA Meeting of the Capsicum and Eggplant Workgroup (http://eucarpia2016.hu/) will take place from 12 to 14 September, 2016 in Kecskemét, Hungary and chaired by Dr. Katalin Ertsey Peregi.

In the coming years, the Section Vegetables will organize the following workgroup meetings:

1. In 2018 (likely in spring), the next meeting of the Tomato Workgroup will be organized in Italy by Dr. Luigi Frusciante/Dr. Mara R. Ecolanoi (University of Naples "Federico II", Italy) and Dr. Silvana Grandillo (Institute of Biosciences and Bioresources, Italy).
2. In 2019, the next meeting of the Leafy Vegetables workgroup will be organized in Czech Republic by Prof. Ales Lebeda (Palacký University in Olomouc).

Yuling Bai, Section Chairperson, bai.yuling@wur.nl

k. Fruit

During 2015 the “Fruit Section” of the “European Association for Research in Plant Breeding” organized the XIV EUCARPIA Symposium on Fruit Breeding and Genetics that took place in Bologna, Italy, from June 14 to 18, 2015. The meeting lasted over five days and included a day for technical visits.
Excellent introductory lectures were presented on three topics that are important to fruit tree breeders and geneticists. On Sunday evening, June 14, Prof. Lars Ove Dragsted (Professor of Biomedicine and Nutrigenomics, University of Copenhagen, Denmark) officially opened the symposium with a lecture on “The role of fruit consumption in human health”. During the program, Prof. Cesare Gessler (Emeritus of the ETH, Zurich, Switzerland) presented a lecture on “Biotechnology for a pesticide free orchard: a promise or an utopia?” to open the session on “Breeding and genetics for resistance to biotic stresses”. Finally, Prof. Michele Morgante (Professor of Genetics, Udine University, Italy) opened the “Advances in 'OMICS' and new technologies” session with a talk entitled “Lessons learned from the sequencing of fruit tree genomes”.
Three parallel technical visits were organized on 16 June in three different fruit tree producing areas of the Emilia-Romagna Region. The visit to Ferrara was mainly devoted to apple and pear orchards, the one to Faenza focused on apricot and peach orchards, and the last one, to Vignola visited cherry orchards.
The last day of the symposium was dedicated to the presentation of the main results of the EU project FruitBreedomics (“Eucarpia-hosted FruitBreedomics International Conference”) and an additional 30 European delegates joined the symposium for this session.
The meeting included 52 oral presentations and more than 130 posters organized in 6 scientific sessions. The symposium attracted more than 180 delegates from 31 countries belonging to four continents. Most of the delegates were from Europe (132) whilst the remainder came from Asia (30), North and South America (13) and Oceania (5). As expected, many delegates were from Italy (more than 50) and the closest countries (especially Spain and France). The presence of various delegates from other countries like South Korea (12), Hungary (8), USA (7), Israel, Chile and Czech Republic (6) is further proof of the international breadth of the symposium. A large proportion of the delegates were students and young researchers and this highlights the vitality of the Eucarpia fruit breeding and genetics section.
The symposium offered the chance to strengthen the cooperation between Eucarpia and the International Society for Horticultural Science (ISHS), two scientific organizations that pursue common goals. Following the agreement between Eucarpia and ISHS, we planned to publish during 2016 the proceedings of the symposium in Acta Horticulturae. Currently the submitted papers are in the review phase that is coordinated by the organizing and scientific committees.

Future meetings
The XV Eucarpia Symposium on Fruit Breeding and Genetics will be hosted by Dr. Jiří Sedlák from the Research and Breeding Institute of Pomology Holovousy Ltd. in Czech Republic in 2019.

Stefano Tartarini, Section Chairperson, stefano.tartarini@unibo.it

l. Ornamentals

The XXV International Eucarpia Symposium Section Ornamentals was held from June 28 to July 2 in Melle, Belgium. Around 220 participants attended the symposium, representing 24 countries. Proceeding of the symposium were published in Acta Horticulturae volume 1087.

"Crossing borders" was the central theme of the symposium. This theme refers to the ambition of the symposium to explore new opportunities and to go beyond traditional ornamental plant breeding. Recent boosts in fundamental knowledge and new tools, including gene expression and genome sequencing, become also applicable for efficient selection and breeding in ornamentals. The symposium held seven sessions covering molecular breeding, flower, stress, plant morphology, biodiversity, interspecific breeding and disease resistance breeding.
Active interaction and discussion between private plant breeding industry and academia was attained in two workshops. The first workshop dealt with 'Future perspectives for ornamental breeding'. Participants were introduced to the current status of the vegetable breeding industry and how modern breeding tools are incorporated into these programs. It was suggested that ornamental breeders are still living in "the eighties" compared to these vegetable breeding companies, and there is an urgent need to close this gap. The second workshop on 'Intellectual property for plants – hot topics' was hosted by the International Community of Breeders of Asexually Reproduced Ornamental and Fruit Varieties (CIOPORA). It comprises a discussion on three issues: (1) Minimum distance or how similar should varieties be?, (2) Essentially Derived Varieties (EDV) – are all mutants and GMO cultivars considered to be EDV? and (3) Patents for plant innovations – evil or blessing? The outcome of this debate showed that intellectual property remains a key issue for plant breeders.

During the symposium I also was elected as the new Chairperson for the Section Ornamentals. I wish, on behalf of all participants of the symposium and the members of our section, to thank Dr. Jaap Van Tuyl for his contribution to the section as Chairperson in the last years.

Group picture XXV International Eucarpia Symposium Section Ornamentals was held from June 28 to July 2 in Melle, Belgium

Future meetings

The next meeting of the section will be organized in Erfurt Germany in 2018.

Johan Van Huylenbroeck, Section Chairperson, johan.vanhuylenbroeck@ilvo.vlaanderen.be

m. Oil and Protein Crops

The Section, Oil and Protein Crops, successfully organized two meetings in 2015. Protein Crops Working Group (PCWG) organized a joint International Symposium on Protein Crops between PCWG and the Misión Biológica de Galicia (MBG) of the Spanish National Research Council (CSIC) in Pontevedra, Spain on 4-7 May 2015. I would like to thank here again Prof. Antonio M. De Ron and his team for the well done job.

From 1 to 5 November 2015, Oil and Protein Crops Section Meeting was jointly organized with the Second International Plant Breeding Congress in Antalya, Turkey. During 30 parallel sessions in three meeting rooms, 333 participants from 40 countries contributed 400 oral and poster presentations.

Future meetings

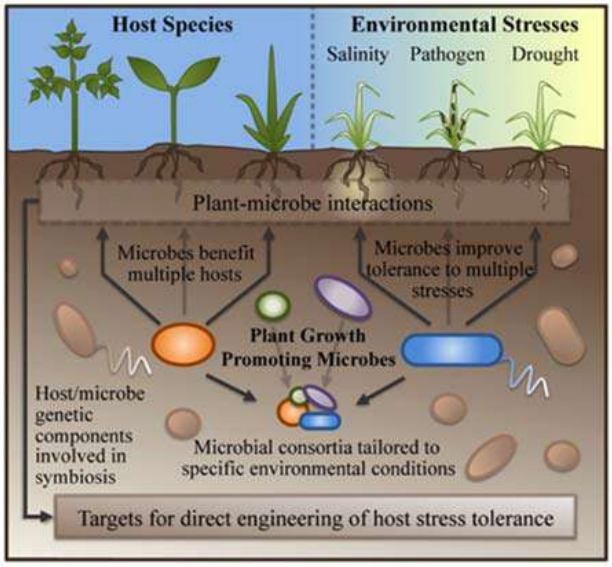
The next, Oil and Protein Crops Section Meeting will be held in June 2018 in Chisinau, Moldova. Dr. Maria Duca has taken the initiative to organise the meeting with the supports of her University where she is the Rector of University of Academy of Sciences of Moldova.
The next PCWG meeting together with Fodder Crops and Amenity Grasses Section will take place in Vilnius, Lithuania in 2017. Dr. Gintaras Brazauskas from Lithuanian Research Centre for Agriculture and Forestry (LRCAF) will lead the local organization for this joint scientific event.

Bülent Uzun, Section Chairperson, bulentuzun@akdeniz.edu.tr

n. Section Organic & Low-input Agriculture

This section addresses the issues that are relevant to breeding for organic and low-input agriculture.

In 2015 the first Eucarpia Workshop on Implementing Plant – Microbe Interaction in Plant Breeding was held from 25-26 June at the Technische Universität München in Freising Weihenstephan, Germany. Some 40 participants shared their knowledge on this relatively unknown and complex topic for breeders and formed a working group Plant-Microbe Interaction within this Section Organic and Low-input Agriculture. The proceedings of this workshop has been published on the Eucarpia website: http://www.eucarpia.org/images/2015_Proceedings_Breeding_plant_microbe_interaction_workshop.pdf . To support this network information on the interests, topics, and publications of the working group members was included in this proceedings book.



"*The fundamental change required is a broader recognition that plants do not exist as autonomous organisms governed entirely by their genetic blueprints, but rather serve as ecological niches for diverse communities of easily overlooked microbes, which work in concert with the plant to survive in a wide range of stressful environmental conditions*."

Coleman-Derr D and Tringe SG (2014) Building the crops of tomorrow: advantages of symbiont-based approaches to improving abiotic stress tolerance.

Front. Microbiol. 5:283. doi: 10.3389/fmicb.2014.00283

Planned meetings

2016: during the Eucarpia General Congress 2016 there is a session planned on Plant-Microbe Interaction.

2018: a section meeting/conference on 'Breeding for diverse cropping systems: Plant-Plant interactions'. Gunter Backes and Maria Finckh will take the lead; to be organised in Germany. For information: gunter.backes@uni-kassel.de.

Edith Lammerts van Bueren, Section Chairperson, e.lammerts@louisbolk.nl, edith.lammertsvanbueren@wur.nl

CORPORATE MEMBERS' SELF-INTRODUCTION

(alphabetically, not edited)

Bayer: Science For A Better Life

Bayer is a global enterprise with core competencies in the Life Science fields of health care and agriculture. Its products and services are designed to benefit people and improve their quality of life. At the same time, the Group aims to create value through innovation, growth and high earning power. Bayer is committed to the principles of sustainable development and to its social and ethical responsibilities as a corporate citizen.

Within Bayer, the business unit Vegetable Seeds is responsible for all vegetable seeds activities worldwide from research and breeding to after sales service. Bayer offers expert advice and 1.200 high-quality vegetable seed varieties in 25 crops under the brand NunhemsTM. Bayer is present in all major vegetable production areas around the globe with 26 breeding locations and 2 research laboratories. It is our mission to develop innovative solutions and concepts that meet local and global needs of our customers. Understanding these needs and working together towards a healthy, sustainable and profitable business makes us the global specialist in vegetable seeds.

CRI - Crop Research Institute

The Crop Research Institute (CRI) covers a wide range of agricultural research activities, covering various different types of crops and research topics in the area of crop production systems, in the soils and climatic conditions of Central Europe. CRI is a public research institute that was founded in 1951. Our mission is conducting research in the areas of the agricultural and environmental sciences, leading to developing sustainable systems and technologies of crop production, in order to improve plant production potentials, and to enhance the quality of food-, feed-, and crop-based raw materials in a changing climate. CRI's main research themes include: 1) Sustainable arable land management and cropping systems; 2) Genetics, plant breeding, and quality of plant products; 3) Environmentally balanced systems of crop protection and plant health. Under these research themes we focus different research areas that include: crop production, agro-ecology, genetics and breeding, plant nutrition, crop protection and plant health, plant physiology, cryobiology, weed science, farming systems, soil science, plant biotechnology, molecular biology, food quality, etc..“

Delley seeds and plants Ltd (www.dsp-delley.ch)

Delley seeds and plants (DSP) Ltd is a small and medium-sized corporation devoted to plant breeding, variety development and distribution of cereal-, maize-, soybean-, forage crop- and vegetable seeds for propagating purposes. DSP collaborates closely with Agroscope (the Swiss centre for public agricultural research); Agroscope and DSP are co-owners of the crop varieties developed together. DSP is in charge of maintenance breeding for most species, registration of varieties on national variety lists, and the protection of intellectual property rights. Beyond that, DSP maintains close contacts within the Swiss seed sector and with the food processing industry. DSP also fosters international cooperation with breeders and with partners, who commercialise the varieties by Agroscope/DSP abroad. In turn, DSP represents foreign varieties of certain crop species in Switzerland. The company is owned by those seed producers (farmers), who are members of the association of Swiss seed growers (swisssem). Royalties generated by sales of certified seeds represent the main source of income for DSP.

Federal Research Center Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk

The Institute of Cytology and Genetics (IC&G SB RAS, ~450 researchers) conducts a wide range of research in the field of plant, animal and human genetics. Plant Genetics Department deals with various aspects of plant genetics, cytogenetics and breeding. The research topics include both fundamental research (genome organization and structure; gene mapping and functional analysis) and breeding of new crop varieties. The largest in Russia set of aneuploid, substituted and introgression bread wheat lines has been developed in IC&G. The obtained high-quality spring bread wheat cultivars Novosibirskaya 67 was sown on 10 million of hectares. At present time, the work on chromosome localization and mapping of genes controlling the important traits of adaptation to biotic and abiotic stresses and grain quality. IC&G participates in the international project on sequencing of bread wheat chromosome (IWGSC) being responsible for 5B chromosome. The Breeding Branch of IC&G has the large collection of cereal and vegetable crops, potatoes and ornamentals.

Gene Bank, Prague, the Czech Republic

The Gene Bank is engaged in both research and non-research activities to ensure the evaluation, conservation, and utilization of plant genetic resources (PGR) in the Czech Republic. Specific non-research activities are associated with the assessment, conservation, and use of PGR, which arise from legislation, as well as a number of international obligations of the Czech Republic. This is organized and covered financially by a grant titled the "National program (NP) for the conservation and utilization of PGR and agrobiodiversity". CRI is the

coordinating body of the NP and at the same time the central gene bank for the long-term conservation of generatively propagated PGR. Research activities include designing research projects with use of PGR materials, and upgrading their values by research findings. The GB provides the results of research and non-research activities as well as samples of PGR to breeding practice, to universities, research institutions, and other users. All PGR are well documented in new documentation system GRIN Czech which includes passport and characterisation data as well: https://grinczech.vurv.cz/gringlobal/search.aspx

Institute of Agricultural Resources and Economics (AREI)
The Institute of Agricultural Resources and Economics (AREI) has been established by merging of "State Priekuli Plant Breeding Institute" (hereafter Priekuli research center), "State Stende Cereals Breeding Institute" (hereafter Stende research center) and "Latvia State Institute of Agrarian Economics" (hereafter Economics research center) which were the institutions with long-term scientific research experience over the past hundred years. One of the main directions of AREI is breeding of cereals (wheat, barley, oat, triticale, and rye), potatoes and grain legume varieties for the needs of different farming systems. Research addresses the application of methods from the fields of genetics, biotechnology and plant breeding in order to develop new genotypes satisfying the future demands of society, as well as to carry out research on crop production technologies. Ongoing projects include the production of raw materials for healthy nutrition, resistance breeding in order to meet the requirements of sustainable development, research on the role of genetic diversity (genotype mixtures and composite cross populations), investigations of grain legumes.

KWS
KWS is one of the world's leading plant breeding companies. We are contributing to overcoming the challenges that arise from a growing world population and the rising demand for food, which it entails by improving the performance of our plant varieties and continuously refining the quality of our seed. We use state-of-the-art plant breeding methods and technologies to continuously improve yields and resistances to diseases, pests and abiotic stress. For almost 160 years, KWS has been managed as a family oriented and independent company. In fiscal year 2014/2015, the KWS Group including its 65 subsidiaries and associated companies in more than 70 countries generated net sales of 986 million euros. KWS' core competence is crop breeding. Its annual expenses for research and development amount to 17 percent of the entire net sales. The expenditure on research and breeding has increased continuously over the past ten years. KWS invested 174 million euros in that area in fiscal year 2014/2015 and has about 1,800 employees worldwide working in research and development. As a result, KWS is able to provide farmers with more than 400 new, higher-yielding market approvals every year.

Institute of Plant Genetics of the Polish Academy of Sciences (IPG PAS)
The Institute of Plant Genetics of the Polish Academy of Sciences (IPG PAS), located in Poznan (west Poland) is a public sector research institute performing genetic and molecular studies of agricultural and model plants. The research covers classical and molecular genetics, cytogenetics, genomics, proteomics, metabolomics, biotechnology, integrative plant biology, plant resistance to biotic and abiotic stresses as well as biometry and bioinformatics. Research concerns also the diseases of crop and model plants, including molecular detection of pathogens from plants, soil, air and water as well as studies on plant-pathogen interactions, including proteins and metabolites. IPG PAS is a corporate member of EUCARPIA since middle of nineties. We closely cooperate with Polish and international breeding companies. Main topics concern the creation of initial hybrids originating from distant crossings inside cereals, legumes, grasses, brassicas, potatoes and miscanthus. The aim is to introduce valuable traits, such as the increase of nutritional values, resistance to drought & plant pathogens and many others. The Institute boasts with HR Excellence in Research logo awarded in January 2014.

Leibniz Institute of Plant Genetics and Crop Plant Research (IPK):
The IPK is a leading governmental research center with more than 550 people including 90 PhD students from 30 countries and diverse academic and technical backgrounds. The institute harbors the Federal ex situ genebank for agricultural and horticultural crops. With more than 150000 accessions from 3000 botanical species it represents the largest ex situ genebank within the EU 28. Research activities range from fundamental science to applied research into biotechnology and plant breeding. The main thrust of the research program focuses on the development of innovative approaches to valorize genetic resources of crop plants. Fundamental processes of plant development, speciation and adaptation are investigated and novel tools and methodologies for breeding are developed to further improve crop plant performance, sustainability and resilience. Innovative research approaches benefit from highly advanced technology platforms and expertise regarding plant genomics, phenomics, microscopy, biochemistry, and bioinformatics.

Lithuanian Research Centre for Agriculture and Forestry (LRCAF)
The Lithuanian Research Centre for Agriculture and Forestry (LRCAF) is a public research institution with a mission to provide innovative solutions for agriculture and forestry through scientific research and experimental development. Institution focuses on five areas of interest: soil science, agroecology, food processing, phytopathology and plant breeding. Centre employs a total staff of 575. LRCAF carries long-term plant breeding programs in major field crops, vegetables, fruits and berries with more than 450 cultivars have been released since the establishment of plant breeding activities in 1922. Nowadays breeding of cereals, e.g. winter and spring wheat, spring barley, oats and field peas, and perennial grasses, e.g. perennial ryegrass, meadow fescue, Festuliolium, Kentucky bluegrass, cocksfoot, timothy, red and white clover, is of major focus. Fruit trees, e.g. apple, pear and cherry, berries, e.g. black currant, strawberry, and vegetables, e.g. potato, carrot, onion, tomato and cucumber, are also being bred. Cultivars developed at the Lithuanian Research Centre of Agriculture and Forestry are being marketed in Lithuania, Latvia, Estonia and Belorussia.

Maize Research Institute, Zemun Polje, Belgrade, Serbia
Principal activities of the Maize Research Institute, Zemun Polje are:
- development of maize hybrids, soya bean varieties and small grain varieties of high yielding potential and quality for different environments
- basic research aimed at facilitating applied and developmental programmes in breeding, seed production, growing and utilisation,
- development of cropping systems for high and stable yields of the stated crops under diverse agroecological conditions,
- production of foundation and commercial seed of ZP hybrids and varieties,
- seed drying, processing, quality testing and storing,
- marketing of commercial seed
- development of procedures and methods of maize utilisation as food, feed and in industrial processing,
- implementation of scientific and research programmes and projects aimed at the improvement of stated crops production,
- education and training of experts.

Major accomplishments
- over 700 maize hybrids, 8 soya bean cultivars and 9 small grain varieties,
- gene bank with 6000 accessions.

International cooperation
- MRI cooperates with many institutions from more than 30 countries around the world.

Nordic Genetic Resource Center (NordGen)
The Nordic Genetic Resource Center (NordGen) is a Nordic services and knowledge center owned and financed by the Nordic Council of Ministers. NordGen has offices in Alnarp, in Sweden and in Ås, in Norway. **NordGen Plants** holds more than 33,000 seed accessions. The ordinary collection consists of old landraces, cultivars, breeding lines, and their wild relatives. The special collections consist of material derived from different research projects and the Barley Mutant Collection (largest) comprises about 10,000 accessions. **NordGen Farm Animals** contributes to the Nordic countries work by promoting the genetic, economic, cultural, historical and social values of farm animal diversity to meet the needs of future markets, production systems and climate change. **NordGen Forest** serves as a Nordic meeting place to examine issues in the fields of forest genetics, supply of seeds and plants, and methods for regeneration. Our main goal is to contribute to the establishment of the best possible Nordic forests for the future. **NordGen** is together with The Norwegian Ministry of Agriculture and Food and the Global Crop Diversity Trust responsible for the daily operation of the **Svalbard Global Seed Vault**.

PBS International
PBS International is the world leader in pollination control. Based in the UK, we have been leading the way in applying technology to pollination control since the 1960s, resulting in our enviable position at the interface between plant science and fabric technologies. Customers include commercial seed producers, Universities and research institutes from around the world and across a broad range of species. PBS International invests heavily in research, often working collaboratively with customers to understand how covering plants and their flowers affects plant health with the goal of reducing the problems that can arise and increasing seed yields, particularly in challenging climates. For instance, our unique duraweb® material results in products that are durable, flexible, weather resistant, breathable and halts unwanted pollen. PBS International owes its excellent reputation to an unwavering commitment to quality products and listening to customers' needs.

Rijk Zwaan Company

Rijk Zwaan is a Dutch family-owned vegetable breeding company. Rijk Zwaan is number five in the global vegetable seed market with a turnover of 350 million euros and a market share of 8%.

Rijk Zwaan develops vegetable varieties and sells the seeds produced from them. It combines the huge genetic diversity that nature has to offer with continuous investment in R&D (approx. 30% of the annual turnover). This results in plant varieties with ever-better combinations of desired traits. Rijk Zwaan has more than 1,000 varieties in its assortment, across 25 different vegetable crops.

Rijk Zwaan seeds are sold in more than 100 different countries through 27 locally operating sales subsidiaries and numerous distributors. To align its products perfectly with market requirements, the company maintains close contact not only with growers but also with the rest of the vegetable chain. Rijk Zwaan takes a personal approach and strives for win-win situations and long-term partnerships.

The head office is situated in De Lier, The Netherlands. In addition, Rijk Zwaan has 30 foreign subsidiaries handling sales, R&D and seed production activities.

Rijk Zwaan employs around 2,500 people and they are the company's most important asset. The company culture is centred on involvement, team work and loyalty. As a result, Rijk Zwaan's employees are highly motivated to provide all customers with top-quality seeds and a high level of service.

NEWS FROM THE EUCARPIA SECRETARIAT

Much has happened during the year 2015. It turned out especially well for our upcoming General Congress 2016. The preparations are in full swing, and what began as an ambitious vision is now beginning to take shape.

In addition to preparing the congress, our members system was continuously improved, and it now runs most of the time flawless.

Eucarpia attaches great importance to the satisfaction and benefit of its members. We therefore updated the corporate members' page on our homepage: http://www.eucarpia.org/organisation/partnerships.html. If you are a corporate representative and you have not yet provided us with the current corporate logo and link, please send it to us and we will include it on our homepage to improve your visibility.

We continue to build up smooth interactions between our members and the secretariat. This is why the secretariat is your entry point for any inquiry regarding (e-mail) address changes or any other modification. If there are questions about the member zone, your login data or the renewal of your membership, please do not hesitate to contact us.

We will make any effort to support you to your utmost satisfaction. Please use eucarpia@agroscope.admin.ch to contact us, and do not hesitate to inform us about any section news, meeting information, suggestions or comments, which you would like to have published, so that we can keep the website up-to-date.

New Eucarpia members

The Executive Committee of EUCARPIA is pleased to welcome the following new members (January – December 2015) in our association:

New individual members

Albania	Carka	Frida
Argentina	Carrizo García	Carolina
Austria	Touraev	Alisher
	Adam	Eveline
	Trognitz	Friederike
Bangladesh	Hossain	Mohammad Zabed
Belarus	Harelik	Uladzimir
Belgium	Tschoep	Hendrik
Brazil	do Nascimento Junior	Alfredo
	Kobori	Romulo
Denmark	Borgen	Anders
Finland	Stoddard	Fred
France	Pesteil	Céline
	Vanpouille	Violaine
	Lallouet	Francois
	Charcosset	Alain
	Muranty	Hélène
	Mary-Huard	Tristan
	Heslot	Nicolas
	Menz	Monica
Germany	Pallokat	Phil
	Horneburg	Bernd
	Ahlemeyer	Jutta
	Vaczi	Sebastian
	Thorwarth	Patrick
	Schmidt	Paul
Greece	Korontzis	George
	Foti	Chrisa
	Theologidou	Georgia
	Kargiotidou	Anastasia
	Tzantarmas	Kostantinos
	Mavromatis	Athanasios
India	Saifulla	Muhammad
Indonesia	Suprianto	Edy
	Yenni	Yurna
	Ruswandi	Dedi
Iran	Monirifar	Hassan
Italy	Bellucci	Elisa
	Cominelli	Eleonora
	Sparvoli	Francesca
	Nanni	Laura
	Galeffi	Patrizia
	Dal Ri	Antonio
	Mandolino	Giuseppe

Japan	Ubi	Benjamin
Netherlands	Boerboom	Nic
	Boersma	Tryntsje
	Pérez Jaramillo	Juan Esteban
	Carrion	Victor J
	Motazedi	Ehsan
	Heuven	Henri
	Zych	Konrad
	Buntaran	Harimurti
	Bustos-Korts	Daniela
Norway	Björnstad	Asmund
Poland	Okoń	Sylwia
	Bednarek	Piotr
	Gacek	Edward
	Cwiek	Hanna
Portugal	Vasconcelos	Marta
	Arnholdt-Schmitt	Birgit
	Alves	Mara
Romania	Baciu	Anca
	Borsai	Orsolya
Serbia	Zoric	Lana
Slovakia (Slovak Republic)	Benedikova	Daniela
South Africa	Van der Merwe	Rouxlene
Spain	Silvar	Cristina
Switzerland	Tadele	Zerihun
	Hohmann	Pierre
	Herrera	Juan
Turkey	Yol	Engin
	Sincik	Mehmet
United Arab Emirates	Hussain	M. Iftikhar
United Kingdom	Curtis	Jon
	Fradgley	Nick
	Gaynor	Chris
United States	Schmidt	Jennifer
	McGuire	Patrick
	Nguyen	Henry
	Fowler	Amy Goldman
	Sneller	Clay
Zambia	Maurya	Madan

New corporate members

Croatia	University J.J. Strossmayer
Poland	Plant Breeding and Acclimatization Institute HM Clause
Russia	The Federal Research Center Institute of Cytology and Genetics
USA	UC Davis European Plant Breeding Academy

Membership fees

You can renew your membership on www.eucarpia.org at any time. You will also be asked to do so by e-mail. The membership fee for individual members is €40 for members of Western Europe and developed countries from elsewhere outside Europe, €30 for EU members of Eastern Europe and €20 for members of other Eastern European countries (this special rate also applies to some developing countries outside geographical Europe). Members younger than 30 years or older than 65 years have 50% discount and pay €20 only (€15 and €10 for Eastern EU and developing countries, respectively). The fee of corporate members is €300, with proportionate discounts for developing countries. Corporate membership fee covers the fees of maximum 10 delegates.

The preferred option of payment for individual members is to login to the new members zone of the homepage and click on Membership renewal. You will be able to choose between credit card (VISA or MasterCard) payment or an electronic bank transfer. If you do not have access to internet, you may transfer your payment to:

UBS AG, CH-8098 Zürich, Switzerland
IBAN: CH90 0022 8228 EU10 0387 6
BIC: UBSWCHZH80A

Please indicate your name and membership number in the transfer. Use the SEPA option or, if this is not available at your bank, choose "breakdown of costs". We do not accept cheques. Online payment by credit card without logging in is available on request at the Secretariat.

Membership privileges

Individual membership
EUCARPIA membership advantages include:

- Access to the members zone of the website with possibility to contact other EUCARPIA members
- Free publication of breeding related international events on the website (contact the Secretariat)
- Reduction (≥40 €) in the registration fee for events (General congress, symposia, meetings, etc.) organized by EUCARPIA.
- Participation in the EUCARPIA sections of your interest (or in all if you wish).
- Reception of the EUCARPIA Bulletin, with information on EUCARPIA activities, publications, dates and information of symposia, meetings and events related to plant breeding, etc.
- Facilitation of international cooperation, exchange of methods and plant material, etc.

Corporate membership
In addition to the advantages entitled to individuals, Corporate members (Institutes, Departments, Companies, Associations, Societies, etc.) advantages include:

- Possibility of enlisting up to 10 individual delegates associated to the corporate membership.
- A link to the web page of the Institution can be posted in the web page of EUCARPIA. This web page is visited mainly by breeders and receives many hits per day.

Discounts on journals and books

Discounts are available for EUCARPIA members for several book titles and journals. Members can access these discounts in the reserved member zone of the EUCARPIA website, www.eucarpia.org

Wiley
According to an agreement between Wiley and EUCARPIA, there is a 50 % reduced rate for personal subscriptions to the journal: Plant Breeding. Current rate for annual subscription is 95 Euro (print and online) for EUCARPIA members compared to regular 189 Euro. Subscriptions to the above journal can be made on the following web page, accessible also in the member zone of the EUCARPIA website:
http://www.wiley.com/bw/journal.asp?ref=0179-9541

Selected titles of Springer at a 25% discount
As a member of EUCARPIA you are entitled to a discount of 25% on all titles in the series "Handbook of Plant Breeding" (presently 8 titles), and on about 50 more English-language books in the area of plant sciences. The "Handbook of Plant Breeding" series is managed by former Eucarpia president Jaime Prohens and the individual titles are all edited by prominent EUCARPIA members.

You are invited to browse through the books on offer and order at the discounted rate. Take advantage of this special offer and visit the dedicated Springer website for EUCARPIA members, available in the member zone of the EUCARPIA website:
http://www.springer.com/societies+%26+publishing+partners/eucarpia?SGWID=0-163902-0-0-0&token=EUCARPIA25>

New book: Plant Genetic Resources and Climate Change
CABI Climate Change Series
Edited by Mike Jackson
December 2013 / Hardback / 312 Pages / 9781780641973 £85.00 / $160.00 / €110.00
http://bookshop.cabi.org/?page=2633&pid=2552&site=191

EUCARPIA members can get 20% off when they order online at http://bit.ly/1gRykCZ and enter the code CCPGRCC20 at the online checkout!

EUCARPIA Bulletin

The EUCARPIA Bulletin No. 44 will be issued in March 2017. If you would like to publish information about congresses, meetings, publications, section news or any other information relevant to other members, please send in your contribution to the Secretariat by **December 1, 2016.**

EUCARPIA MEETING CALENDAR FOR 2016 AND LATER

More information and updates on these meetings can be found on the web page of EUCARPIA (http://www.eucarpia.org)

XXth EUCARPIA General Congress
"Plant Breeding: the Art of Bringing Science to Life"
August 29 – September 2, 2016, Zurich, Switzerland

Invitation

On behalf of EUCARPIA, Agroscope and ETH Zürich we are pleased to invite you to the 20th Eucarpia General Congress, to be held at ETH Zürich August 29 – September 2, 2016. This event, which is held every four years, brings together scientists and researchers in all fields related to plant breeding. They will present and discuss their findings and visions to meet the great challenges that plant breeding will face over the next decades.

Plant breeding has always been considered both a science and an art. The appearance of new tools and their rapid technological development, such as plant genomics, bioinformatics and phenomics, has added a new dimension to this field. A clear overall perception of the requirements for the plant cultivars of the future is necessary to apply these tools to breeding in a sensible way. At the same time, breeding objectives are gradually influenced by climate change, scarcity of natural resources and necessity to contribute to biodiversity conservation. The different disciplines must collaborate with a common goal in mind in order to succeed in bringing advances in science to life in improved plant cultivars. This is why we have chosen the motto of this conference: "Plant breeding, the art of bringing science to life. "

The congress will discuss how new phenomic tools can help carving crop ideotypes and how the wealth of information about the plant genome can be put to work in novel cultivars. It will search for ways to breed climate smart cultivars and to make best use of the natural variation in genetic resources. It will look for a compromise between innovative strategies to breed new cultivars and the necessity to ensure cultivars reliability for growers and consumers by a regulatory framework. There will also be room for the exchange of new results in breeding individual crops or in developing new breeding objectives.

Topics: Genetic resources and pre-breeding; Phenomics; Genomics and bioinformatics; Stress tolerance; Secondary metabolites; Plant microbe interactions; Innovation vs. regulation.

Sections' activities

Website: www.eucarpia2016.org

a. Potatoes	19th Joint Meeting of EAPR Breeding and Varietal Assessment Section and EUCARPIA Section Potatoes Northern Germany, 2018
b. Cereals	Joint EWAC (The European Cereals Genetics Co-operative) -EUCARPIA Cereals Section Conference Romania (date to be announced) International Conference on Rye Breeding and Genetics Germany, 2020 9th International Triticale Symposium jointly organized with the EUCARPIA Cereals Section Szeged, Hungary, May 23-27, 2016 http://www.triticale.hu
c. Fodder Crops and Amenity Grasses	-
d. Biometrics in Plant Breeding	XVIIth Meeting of the EUCARPIA Section Biometrics in Plant Breeding Belgium, September, 2018

h. Genetic Resources	Section meeting Montpellier, France, 8-11 May, 2017
i. Maize and Sorghum	Section meeting Hosted by Chris-Carolin Schoen, Technische Universität München Germany, 2018
j. Vegetables	XIth EUCARPIA Meeting of the Cucurbitaceae Working Group Poland, July 24-28, 2016 http://www.inhort.pl/files/konferencje_2016/cucurbitaceae/Cucurbitaceae2016_first%20anno7uncm.pdf XVIth EUCARPIA Capsicum and Eggplant Working Group Meeting Kecskemét, Hungary, September 12-14, 2016 http://eucarpia2016.hu/ EUCARPIA Meeting of the Tomato Working Group Hosted by Dr. Luigi Frusciante/Dr. Mara R. Ecolanoi (University of Naples "Federico II", Italy) and Dr. Silvana Grandillo (Institute of Biosciences and Bioresources, Italy) Italy, Spring 2018 XIX EUCARPIA Meeting of the Leafy Vegetables Working Group Hosted by Prof. Ales Lebeda (Palacký University in Olomouc) Czech Republic, 2019
k. Fruit	XV EUCARPIA Symposium on Fruit Breeding and Genetics Hosted by Dr. Jiří Sedlák from the Research and Breeding Institute of Pomology Holovousy Ltd. Czech Republic, 2019
l. Ornamentals	XXVIth International Symposium of the EUCARPIA Section Ornamentals Erfurt, Germany, 2018
m. Oil and Protein Crops	Joint EUCARPIA - PCWG International Symposium on Protein Crops Vilnius, Lithuania, 2017 Oil and Protein Crops Section Meeting Chisinau, Moldova, June 2018
n. Organic & Low-Input Agriculture	Section meeting/conference on 'Breeding for diverse cropping systems: Plant-Plant interactions' Germany, 2018 For information: gunter.backes@uni-kassel.de

OTHER MEETINGS AND EVENTS

13th Solanaceae Conference
"SolGenomics: Advances to Applications"
Sep 12-16, 2016, Davis California USA
www.SolGenomics2016.ucdavis.edu

RECENT EUCARPIA PUBLICATIONS

a. Potatoes	18th Joint Section Meeting of EUCARPIA Section Potatoes and the EAPR Breeding and Varietal Assessment Section Nov 15-18, 2015 Vico Equense, Italy Book of abstracts: http://www.pqsonline.it/images/EUCARPIA/Abstract_book_web2.pdf
b. Cereals	Joint EWAC (The European Cereals Genetics Co-operative) -EUCARPIA Cereals Section Conference May 24-29, 2015 Lublin, Poland Book of Abstracts: http://www.ewac.eu/docs/EWAC_2015_Abstracts.pdf
c. Fodder Crops and Amenity Grasses	-
d. Biometrics in Plant Breeding	**XVIth EUCARPIA Biometrics in Plant Breeding Meeting** Sep 9-11, 2015 Hotel "De Wageningsche Berg", Wageningen NL Book of abstracts: https://www.wageningenur.nl/upload_mm/c/1/e/710941fc-f229-4e8d-b711-519daac6e60b_Eucarpia%20Biometrics%20Book%20of%20Abstracts.pdf
h. Genetic Resources	-
i. Maize & Sorghum	Joint DROPS and EUCARPIA Cereals and Maize and Sorghum Sections conference "Recent progress in drought tolerance: from genetics to modelling" Montpellier, France June 8-9, 2015 Proceedings : https://colloque.inra.fr/drought-tolerant_plants_2015/Proceedings
j. Vegetables	-
l. Ornamentals	-
n. Organic and Low-Input Agriculture	-