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Breeding and Varietal Assessment Section

Update: Winter 2005/6

Welcome

My name is **Herman van Eck** and I am assistant professor in the laboratory of Plant Breeding in Wageningen University NL, specialising in potato genetics. My attendance in the Section Breeding and varietal assessment dates back to my first EAPR conference in Edinburgh in 1990 and I was elected Chair of the Section Breeding and Varietal Assessment at the Triennial Conference in Hamburg in July 2002.

The Section is always in close interaction with the EUCARPIA section Potato, which is chaired by **John Bradshaw** of the Scottish Crop Research Institute, UK. (e-mail: jbrads@scri.sari.ac.uk). With pleasure I seek the advice of John during preparation of EAPR issues, and in that sense John should be regarded as taking on the unofficial job of unofficial secretary for the Section.

Scope of the section Breeding and Varietal assessment.

During the Section Meeting in, Bilbao, July, 2005 the scope of the section was discussed and approved. Below is the authorised text of the scope of the section.

The section will cover a number of scientific disciplines, such as: Botany, Taxonomy, Genetics, Molecular biology, and Biotechnology.

In addition, the section will cover a range of practical issues related to: Progenitor development, Germplasm collections, Parent choice, Clonal selection, evaluation and varietal assessment, Propagation, Plant Breeders Rights and market release.

Currently perceived topics of intensified debate on which the section should promote discussion are e.g.: Potato Genomics, including potato genomic DNA sequencing, Marker assisted selection and marker development, Exploitation of genetic resources, in particular the introgression of stress resistance, Elucidation of the hereditary basis of yield, quality traits and resistance, Genetic, agronomical, economical and societal aspects of transgenic potato.

To achieve these goals the section will meet during the triennial EAPR conference and the triennial EAPR/EUCARPIA section meetings. In addition, any initiative that is in the benefit of section members will be actively promoted, such as the exchange of differential series and control samples, endorsement of scientific standards or uniform evaluation scales.

Section Meeting: Triennial Conference, Bilbao

The Minutes of the EAPR Section meeting “Breeding and Varietal Assessment” held on Tuesday 19 July 2005 at 16:30 hr, during the triennial EAPR conference in Bilbao.

Agenda:

1. Opening,
2. Minutes of the section meeting, Oulu 2003,
3. Scope of the section,
4. Name of the section,
5. Other potato and/or Solanaceous genomics conferences,
6. Interaction with the PAA section Breeding and Genetics
7. Next joint meeting of the Eucarpia/EAPR sections in Ireland
8. Any other business
9. Closing

Minutes

1. Opening: The chairman opened the meeting and read the agenda. The agenda was accepted and no further points were proposed.
2. The minutes (included in the e-mail invitation for this meeting) of the section meeting held in Oulu 2003 were approved. The chairman gratefully acknowledged John Bradshaw for his report.
3. Scope of the section: The council of EAPR has requested the Section chairmen to write down the scope of their section. A draft version (included in the e-mail invitation for this meeting) was discussed. One amendment was proposed and accepted. The issue of resistance should include both stress resistance as well as pathogen resistance. The word stress would suffice to indicate both.

Several ideas were proposed to promote the activities and relevance of the section. Prof. Jacobsen suggested that projects for the current and future EU-framework the section should be included as a partner. The section could function as an intermediate between those who generate knowledge and those who utilise knowledge. The EU values the dissemination of results, and the section meetings are an obvious platform to enable this. Prof. Wenzel suggested that the section Potato of Eucarpia would also qualify for such a role in EU research projects. Stimulation of the interactions between developers and users of knowledge was stressed again. The approved version of the scope of the section is an appendix to the minutes.

4. Name of the section: After discussion on the pro and cons for name change the majority of the votes were in favour of keeping the current name. The section name will remain: “Breeding and varietal assessment”. It was generally accepted to cease discussions on the name of the section for the near future.

Agenda points 5, 6 and 7 were jointly discussed:

5. Other potato and/or Solanaceous genomics conferences
6. Interaction with the PAA section Breeding and Genetics
7. Next joint meeting of the Eucarpia/EAPR sections in Ireland

The chairman reported that between the meeting in Oulu (2003) and Bilbao (2005) it became clear that the “International Conference on the Molecular Biology of the Potato” could not be revived. Nevertheless in September 2004 the “First Solanaceae Genome Workshop” was held in Wageningen. This will continue to be an annual event with the 2nd Solanaceae Genome Workshop on 25-29 September 2005 in Ischia, Italy.

Dr. Christian Thill offered new information and a kind invitation to visit USA in 2006. The 3rd Genome workshop will be held in Madison Wisconsin USA together with the PAA and the Botanically oriented “6th International Solanaceae Conference”. These three conferences will be united into the “Three Solanaceae Groups Converge in 2006” see: <http://www.hort.wisc.edu/PAA-Solanaceae/>. Proposed place and dates: the Monona Terrace, Madison, Wisconsin, July 23-27, 2006.

The theme of this 3-in-1 meeting is “Genomics meets Biodiversity”. The theme clearly reflects the interests of those working in genomics and botany, and indeed the exploitation of natural diversity for breeding purposes is gaining momentum due to the ongoing genomics programs in various countries.

The possibility that the section meeting would joint this USA event was considered carefully, but the long lasting relation with EUCARPIA – section potato cannot easily be cancelled. The meeting agreed to promote attending both meetings in USA and Ireland.

The next joint EAPR-EUCARPIA section meeting will be organised by Dan Milbourn from Teagasc Crops Research Centre, Oak Park, Carlow, Ireland. The following recommendations were proposed during the meeting: Wisconsin and Ireland should avoid overlap in presentations held by speakers. Therefore it is required to select a theme that is different from the issues at stake in Wisconsin. Possibly Phytophthora resistance is too obvious, but much work is ongoing and will not be covered in Wisconsin. The implementation of markers and genome science was proposed as a theme by one of the breeders (ir. Guus Heselmanns). Finally it was decided that selection of the theme is left to the local organisers. The breeders commented on the September, because this is harvest time. Breeders would ideally attend meetings between 2nd half of November – February. Picking a date is also left to the local organisers.

8. Any other business: No other issues were raised

9. Closing: The meeting closed at 18.00 hr

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Section Meeting 2006

Teagasc Crops Research Centre is proud to host the triennial joint section meeting of the EAPR Breeding and Varietal Assessment and EUCARPIA Potato Sections. The local Organising Committee is composed of Dan Milbourne, Denis Griffin and Leslie Dowley. The Scientific Programme Committee: Dr. John Bradshaw (Chairman, Eucarpia Potato Section), Dr. Herman van Eck (Chairman, EAPR Breeding and Varietal Assessment), Dr. Dan Milbourne, Denis Griffin

The Theme of the meeting is: ‘The Science of Selection: Potato Breeding Methodology for the 21st century’.

As potato breeders and geneticists, we live in a time of rapid change, particularly with respect to advances in science and technology. Trials of the first transgenic potato varieties are taking place in Europe. The potato genome is about to be sequenced. Breeders are actually beginning use to MAS in breeding programmes. Dominant major resistance genes CAN confer broad spectrum disease resistance. We are developing a greater understanding of the genetics, biochemistry and physiology of complex traits. We are beginning to understand what pathogens do to plants, and

what plants do to pathogens (and themselves) in response. We know that the climate we have now may not be the climate we have in twenty years.

All of this begs many questions: How will these advances in knowledge change the way in which potato breeding is practiced over the next decade, or even the next century? How can we actually incorporate these advances into potato breeding programmes for the best effect? Which strategies are suitable for which situations?

We would like you to come to this meeting, and tell us what you are currently doing in the area of potato breeding, genetics and related areas. If you are a breeder, tell us about your breeding programme; if you are a molecular biologist, tell us about your favourite genes; if you are a pathologist, tell us about your favourite pathogen. However, when you are giving your oral presentation or discussing your poster, we would ask you to spend a little time outlining how your work will impact the future shape of potato breeding, or conversely, what you think the future needs of potato breeding are. In this way, the natural interests of the members of the two sections and other meeting participants will dictate how the theme is addressed.

Outline of the Conference Programme

The meeting will take place over two and a half days, on Monday 20th, Tuesday 21st and a half day on Wednesday 22nd. The programme will include a trip to Oak Park Research Centre, which is only two minutes from the conference venue. It is envisaged that the majority of delegates will arrive in Carlow on the evening of Sunday 19th, and a welcome reception will take place at the conference hotel on this evening.

The registrations **deadlines** are: 31st July 2006 if you wish to submit an abstract and 31st of August if you do not wish to submit an abstract
<http://www.teagasc.ie/publications/2006/20061120.htm>

Potato Research

The new externally-managed format for *Potato Research* starts in January 2006 and the Council has given an undertaking to publish 4 editions per year.

I encourage as many Section members as possible to submit papers. See the EAPR website for more information at www.eapr.net or www.editorialmanager.com/potr/ for any specific queries, please contact the editor, Professor Paul Struik (e-mail: paul.struik@wur.nl).

2006 events

Events which may be of interest to Section members in the next 12 months include:

23-27 July: 90th Annual Meeting of the Potato Association of America. Madison, Wisconsin, USA. www.hort.wisc.edu/PAA-Solanaceae

13-19 August: 27th International Horticultural Congress, Seoul, Korea.
www.ihc2006.org

20-26 August: 6th World Potato Congress, Boise, Idaho, USA.
www.potatofoundation.com

Let us know what you think!

You are invited to submit your comments on the Section to keep the section up to date with any developments or events and to offer your views or suggestions on any issues relevant to the Section.

I will do my best to take as many views into account in our decision-making and hope to see you in November in Carlow, Ireland.



Herman J. van Eck