

Preliminary Program (status as of September 10 2013)
EUCARPIA SECTION ORGANIC AND LOW INPUT AGRICULTURE

Conference on

Breeding for Nutrient Efficiency

24 - 26 September 2013, Georg-August-Universität, Göttingen, Germany

Venue: Zentrales Hörsaal-Gebäude (Central Lecture Hall Building), Lecture Hall 008

Platz der Göttinger Sieben 5, 37073 Göttingen, Germany

Scientific Organising Committee:

Heiko Becker (Göttingen, Germany)

Edith Lammerts van Bueren (Wageningen, The Netherlands)

Carlo Leifert (Newcastle, UK)

Kristian Thorup-Kristensen (Copenhagen, Denmark)

Tuesday, 24 September

11:00 Registration, poster mounting, soup, finger food and drinks

13:00 - 18:00 **Session 1: Basic concepts and methodologies to improve nutrient efficiency** (Chair: Edith Lammerts van Bueren)

13:00 **Welcome address:** *Beat Boller* (President of EUCARPIA, CH)

13:15 **Keynote:** *Kristian Thorup-Kristensen* (University of Copenhagen, DK) - Combining agronomic and breeding approaches for improved nutrient use efficiency

13:50 **Keynote:** *Bill Thomas* (James Hutton Institute, UK) - Association genetics of nitrogen use efficiency parameters in winter barley

14:25 *Hwat Bing So* (CAAS, Beijing & Griffith University, Australia) – Characterising nitrogen and water use efficiency of Chinese wheat and maize varieties through field and lysimeter trials (part of the NUE-CROPS Project)

14:50 - 15:20 **Coffee Break**

15:20 *Andreas Stahl* (Justus Liebig University, D) - Nitrogen use efficiency in winter oilseed rape: Characterization and phenotyping of a *Brassica napus* diversity set

15:40 *Jose Rafael Chan Navarrete* (Wageningen University, NL) - Evaluation of NUE in spinach with a hydroponic system using the Ingestad Model

16:00 *Pauline Kerbiriou* (Wageningen University, NL) - Breeding lettuce for improved resource capture, root functioning and robustness

16:20 *Dorcus Gemenet* (University of Hohenheim, D) - Genetic variation in West and Central African Pearl Millet and association mapping for low phosphorus tolerance based on DArT markers

16:40 **Keynote:** *Angharad Gatehouse* (Newcastle University, UK) - Quantitative proteomics to study crop plant response to contrasting fertilisation regimes

19:00 **Come together and Conference Dinner (Old Town Hall, Göttingen)**

Wednesday, 25 September

8:30 -12:10 **Session 2: Breeding programs and research on nutrient efficiency**
(Chair: Heiko Becker)

8:30 *Franziska Löschenberger* (Saatzucht Donau, A) - Analysis of genotype by environment interaction in an international ring test related to breeding for organic agriculture

9:00 *Monika Messmer* (FiBL, CH) - Genotype x management interaction for nutrient use efficiency (NUE) of maize varieties tested under different tillage and fertilization regimes

9:30 **Keynote:** *Jonathan Lynch* (Pennsylvania State University, USA) – Steep, cheap, and deep: breeding targets for deeper roots

10:05 - 10:30 Coffee Break

10:30 *Sara Brumlop* (University of Kassel, D) - N-uptake in winter wheat pure line varieties and winter wheat composite cross populations in the F₁₁

10:50 *Willmar Leiser* (University of Hohenheim, D) - Selecting sorghum for adaptation to low phosphorus soils in West Africa

11:10 *Péter Mikó* (Hungarian Academy of Sciences, HU) - Comparison of different breeding strategies of cereals through different environments

11:30 *Antonin Le Campion* (INRA, F) – Is low input management a good selection environment to screen winter wheat genotypes adapted to organic farming?

11:50 *Frédéric Rey* (ITAB, F) - Organic seeds and plant breeding: the stakeholder's uses and expectations

12:30 Departure to Excursion

13:15 KWS Saat AG Einbeck

Lunch (Soup and finger food) & Introduction to KWS

15:00 **Keynote:** *Walter Schmidt* (KWS, D) - Experiences from organic maize breeding and prospects of coevolutionary breeding

Experimental Station Wiebrechtshausen: Demonstration of breeding and research activities

19:00 Dinner and Poster Session (Central Lecture Hall Building, Göttingen)

Thursday, 26 September

8:30 - 13:00 **Session 3: Genetic and agronomic advances in nutrient use efficiency of four major crops: Results from the NUE-CROPS project** (Chair: Carlo Leifert)

8:30 *Peter Werner* (KWS, UK) - The interaction of nitrogen with yield in wheat

8:50 *Thomas Presterl* (KWS, D) - Improving nitrogen use efficiency in maize

9:10 *Heiko Becker* (Georg-August-Universität, D) - Breeding strategies to improve nitrogen use in oilseed rape

9:30 *Cesar Ospina* (Wageningen University, Agrico, NL) - Diversity of crop development traits and nitrogen use efficiency among potato varieties grown under contrasting nitrogen regimes

9:50 *Tim George* (James Hutton Institute, UK) - Getting to the root of phosphorus use efficiency in potato

10:10 - 10:40 **Coffee Break**

10:40 *Dorte Dresboll* (University of Copenhagen, DK) - Model simulation of cropping system NUE as affected by genotype variation in NUE based on different plant traits

11:00 *Jian Wu* (CAAS, Beijing) - QTL mapping of NUE in *Brassica rapa* and maize

11:20 **Panel discussion:** Improving resource use efficiency - where do we go from here?
Panel members: *Carlo Leifert*, Chair (Newcastle University, UK), *Hartwig H. Geiger* (University of Hohenheim, Germany), *Angharad Gatehouse* (Newcastle University, UK), *Franziska Löschenberger* (Saatzucht Donau, A), *Beat Boller* (Agroscope Reckenholz, CH)

12:50 **Closing remarks** (*Edith Lammerts van Bueren*, Wageningen University, NL)

13:00 – 14:00 Lunch

14:00 Excursion to the Experimental Station Reinshof,
Georg-August Universität Göttingen

or

14:00 Guided Tour Göttingen City