"Genetic diversity – The key for improving drought stress tolerance in crops"

19. to 20. November 2019 in Seminaris CampusHotel, Berlin

13.00 – 13.15 Opening Secretary of State

Opening lecture

13.15 – 14.00 **Marie Haga, Crop Diversity Trust, Bonn/Germany**
Genebanks: an underused resource for improving drought tolerance in crops?

Session 1: "Exploring the diversity space of plant genetic resources"

14.00 – 14.30 **Nils Stein, Leibniz Institute of Plant Genetics and Crop Plant, Gatersleben/Germany**
Genebank genomics for improved access and utilization of plant genetic resources

14.30 – 15.00 **Susanne Dreisigacker, CIMMYT Mexico**
CIMMYT's use of synthetic hexaploid wheat in breeding

15.00 – 15.30 **Ernesto Igartua Arregui, Spanish National Research Council, Zaragoza/Spain**
Exploring the adaptation of Spanish barley landraces and possible applications in breeding for drought stress

15.30 – 16.00 Coffee break

Session 2: "Phenotyping for drought stress tolerance"

16.00 – 16.30 **Mark Tester, King Abdullah University of Science and Technology, Thuwal/Saudi Arabia**
Genetic diversity – The key for improving salt stress tolerance in crops

16.30 – 17.00 **Menachem Moshelion, Hebrew University of Jerusalem, Rehovot/Israel**
Risk-management strategies and transpiration rates of wild barley in uncertain environments

17.00 – 17.30 **Kerstin Neumann, Leibniz Institute of Plant Genetics and Crop Plant, Gatersleben/Germany**
Precision phenotyping reveals drought-adaptive QTL in diverse barley and wheat collections

Evening lecture

18.30 – 19.00 **Hermann Lotze-Campen, Potsdam Institute of Climate Change, Potsdam/Germany**
The role of agricultural productivity improvement for achieving the Sustainable Development Goals

Session 3: "Mapping of drought stress tolerance"

09.00 – 09.30 **Roberto Tuberosa, University of Bologna, Bologna/Italy**
Mining the durum wheat QTLome for drought-resilient haplotypes through high-throughput phenotyping and sequence analysis

09.30 – 10.00 **Shuki Saranga, Hebrew University of Jerusalem, Rehovot/Israel**
Ancestral QTL alleles from wild emmer wheat enhance drought resistance and productivity of modern wheat

10.00 – 10.30 **Klaus Pillen, Martin-Luther-University of Halle (Saale), Halle/Germany**
Mining of wild barley alleles improving drought stress tolerance in the nested association mapping population HEB-25

10.30 – 11.00 Coffee Break

Session 4: "The genetic signature of drought stress tolerance"

11.00 – 11.30 **Maria von Korff, Heinrich-Heine-University, Düsseldorf/Germany**
Inflorescence development and floret fertility under drought in barley

11.30 – 12.00 **Rajeev Varshney, International Crops Research Institute for the Semi-Arid Tropics, Hyderabad/India**
Integrating genetics, genomics and physiology to understand drought adaptation in chickpea

12.00 – 12.30 **Dorothea Bartels, University of Bonn, Bonn/Germany**
Desiccation tolerance in vegetative tissues of angiosperm plants evolved through gene duplications and network rewiring

12.30-13.30 Lunch

Session 5: "Breeding for drought stress tolerance"

13.30-14.00 **Matthew Reynolds, CYMMIT Mexico**
Key physiological traits for strategic crossing in breeding wheat for drought adaptation

14.00 – 14.30 **Peter Langridge, University of Adelaide/Australia**
Identification and use of diversity for enhancing wheat and barley productivity in low-yielding environments

14.30 – 15.00 **Heike Lehnert, Julius Kühn-Institute, Quedlinburg/Germany**
Estimation of the genetic diversity in wheat (*Triticum aestivum* L.) regarding mycorrhization of roots and its impact on drought stress tolerance

15.00 – 15.30 Coffee Break

Session 6: "International collaboration"

15.30 – 16.00 **Hans Braun, CYMMIT Mexico**
Coordinated international collaboration – paramount for wheat improvement

16.00 – 16.30 **Stephen Visscher, Global Institute for Food Security, Saskatoon/Canada**
International collaboration for national and global impacts