

# Virtual LTE Workshop 2020

LTE research - methods, standardisation and modelling

1 to 2 October 2020

All times are given as Central European Summer Time CEST (UTC+2)

## 01 October 2020

**9:00 Bernd Honermeier**

Justus Liebig University Gießen, Germany

Introduction into the workshop and organisational remarks

### **Session 1 International LETs – Elucidation from different perspectives**

**9:30 Meike Grosse, Carsten Hoffmann**

Leibniz Centre for Agricultural Landscape Research (ZALF) Müncheberg, Germany

LTE in Germany: Digging, organizing and distributing an agricultural data treasure

**10:00 Carolina Cardoso Lisboa, Jonathan Storkey, Richard Ostler**

Rothamsted Research Harpenden, UK

Current activities of Global Long-Term Agricultural Experiment Network (GLTEN)

**10:30 Andy Macdonald**

Rothamsted Research Harpenden, UK

The Rothamsted long-term experiments

**11:00 Janna Macholdt<sup>1)</sup>, Steffen Hadasch<sup>2)</sup>, Hans-Peter Piepho<sup>2)</sup>, Moritz Reckling<sup>3)</sup>,  
Arezoo Taghizadeh-Toosi<sup>4)</sup>, Bent Tolstrup Christensen<sup>4)</sup>**

<sup>1)</sup>Justus Liebig University Gießen, Germany, <sup>2)</sup>Hohenheim University, Germany, <sup>3)</sup>Leibniz Centre for Agricultural Landscape Research (ZALF) Müncheberg, Germany, <sup>4)</sup>Aarhus University, Denmark

Long-term yield variability trends for winter wheat and spring barley – insights from the Askov LTE in Denmark

**11:30 Sara König, Hans-Jörg Vogel, Uli Weller, Ute Wollschläger**

Helmholtz Centre for Environmental Research (UFZ) Halle, Germany

What do modellers expect from LTEs?

## **Lunchbreak**

## Session 2 FACE and microbiology

**13:00 Gerald Moser, Christoph Müller**

Justus Liebig University Gießen, Germany

What have we learned from the Giessen FACE grassland after 20 years of elevated CO<sub>2</sub>?

**13:30 David Rosado-Porto, Stefan Ratering, Massimiliano Cardinale, Corinna Maisinger, Gerald Moser, Christoph Müller, Sylvia Schnell**

Justus Liebig University Gießen, Germany

Elevated atmospheric CO<sub>2</sub> modifies mostly the active rhizosphere soil microbiome in the Giessen FACE experiment

**14:00 Doreen Babin<sup>1)</sup>, Loreen Sommermann<sup>2)</sup>, Paul Soumitra Chowdhury<sup>3)</sup>, Jan-Helge Behr<sup>4)</sup>, Narges Moradtalab<sup>4)</sup>, Michael Rothballer<sup>3)</sup>, Kornelia Smalla<sup>1)</sup>, Jörg Geistlinger<sup>2)</sup>, Günter Neumann<sup>4)</sup>, Rita Grosch<sup>5)</sup>**

<sup>1)</sup>Federal Research Centre for Cultivated Plants (JKI) Braunschweig, Germany, <sup>2)</sup>Anhalt University of Applied Science Bernburg, Germany, <sup>3)</sup>Helmholtz Center Munich Neuherberg, Germany, <sup>4)</sup>University Hohenheim, Germany, <sup>5)</sup>Leibniz Institute of Vegetable and Ornamental Crops Großbeeren, Germany

Soil microbiota and the health of plants

## Session 3 Statistics

**14:30 Hans-Peter Piepho**

University Hohenheim, Germany

Statistical challenges in the design and analysis of LTE

**15:00 Bärbel Kroschewski<sup>1)</sup>, Christel Richter<sup>1)</sup>, Jürgen Pickert<sup>2)</sup>**

<sup>1)</sup>Humboldt University Berlin, Germany, <sup>2)</sup>Leibniz Centre for Agricultural Landscape Research (ZALF) Müncheberg, Germany

Analysis of a long-term nitrogen fertilization experiment on fen grassland

02 October 2020

### Session 4 Fertilization and soil properties

**9:00 Janna Macholdt<sup>1)</sup>, Merete Styczen<sup>2)</sup>, Hans-Peter Piepho<sup>3)</sup>, Bernd Honermeier<sup>1)</sup>, Sarah A. M. Perryman<sup>4)</sup>, Andy Macdonald<sup>4)</sup>, Paul Poulton<sup>4)</sup>**

<sup>1)</sup>Justus Liebig University Gießen, Germany, <sup>2)</sup> University Copenhagen, Denmark, <sup>3)</sup>University Hohenheim, Germany, <sup>4)</sup> Rothamsted Research Harpenden, UK

Effects of crop rotation and fertilization on cereal yield stability – experiences from the Broadbalk Wheat Experiment Rothamsted and the Crop Rotation Experiment Rauischholzhausen (JLU Giessen)

**9:30 Marcin Studnicki<sup>1)</sup>, Janna Macholdt<sup>2)</sup>, Wojciech Stępień<sup>1)</sup>**

<sup>1)</sup>Warsaw University of Life Sciences, Poland, <sup>2)</sup>Justus Liebig University Gießen, Germany

Impact of mineral fertilization with and without additional organic input on the temporal yield variability of winter rye – new insights from the Skierniewice long-term experiment

**10:00 Marianna Makádi, Tibor József Aranyos, Ágnes Hadházy, Ibolya Demeter, Attila Tomócsik, Viktória Orosz, István HENZSEL**

University of Debrecen, Hungary

Changes of acidic sandy soil properties after long-term application of different organic matters and artificial fertilizers

**10:30 Yavar Vaziritabar, Feng Yan, Bettina Leschhorn, Bernd Honermeier**

Justus Liebig University Gießen, Germany

Soil surface CO<sub>2</sub> efflux depending on seasonal variation and cropping management – results from agricultural LTE

### Final Session

**11:00 Beate Stumpf**

Justus Liebig University Gießen, Germany

Methods, standardisation and modelling in LTE research – Discussion and conclusions