



## LOTEX 2019



### 2<sup>nd</sup> CONFERENCE ON LONG-TERM FIELD EXPERIMENTS 20-21. NOVEMBER, 2019. NYÍREGYHÁZA, HUNGARY

#### Conference programme

#### 20. November 2019

- 8:00-8:45      *Registration - Main building*
- 8:45-9:05      Opening of the conference - Main building**  
Elek Bartha, Vice Rector for Education, University of Debrecen  
István Román, Government Office of Szabolcs-Szatmár-Bereg County
- 09:05-11:00      Plenary lectures - Main building**  
*Chair: Tamás Németh (Kaposvár University, Hungary)*
- 09:05-9:30      László Zsombik (University of Debrecen, Hungary): Story of the Westsik's crop rotation experiment
- 9:30-10:00      István Szabó (National Research, Development and Innovation Office): National and international developmental possibilities of researches based on long-term experiments
- 10:00-10:30      Margaret Glendining (Rothamsted Research): Data curation of long-term experiments based on the electronic Rothamsted Archive (e-RA)
- 10:30-11:00      Holger Lilienthal (Julius Kühn-Institut, Braunschweig): Efficient exploitation of long term field trials in Braunschweig: a challenge for remote sensing and digitalisation
- 11:00-11:45      *Coffee break*
- 11:45-13:00      Session 1. Cereal research in long-term experiments – Main building**  
*Chair: Pavel Čermák (Crop Research Institute, Czech Republic)*
- 11:45-12:00      Péter Pepó, András Szabó, Lajos Fülöp Dóka, Éva Babett Ábrahám, Éva Szabó: Cereal crop models in long-term experiments on chernozem soil
- 12:00-12:15      Katalin M. Kassai, Ákos Tarnawa, Ferenc H. Nyárai, Zsolt Szentpéteri, Adnan Eser, Hajnalka Kató, Márton Jolánkai: Quality and quantity of winter wheat varieties in a 22 years time range
- 12:15-12:30      Ágnes Hadházy, Waleed Ahmed Elmadawy Abido, Ibolya Demeter, Tibor József Aranyos, Marianna Makádi, István Henzsel: Rye plant parameters in the Westsik's crop rotation experiment
- 12:30-12:45      Péter Pepó, Mihály Sárvári, János Kátai: Crop and soil sciences results in long-term experiments under climatic change
- 12:45-13:00      Zsuzsa Erdős, Waleed. A. E. Abido, László Zsombik: Response of winter wheat genotypes to different plant density and nitrogen supply on sandy soil



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**11:45-13:00 Session 2. Gas exchange and physical properties of soils – Advisory Center**  
*Chair: József Zsembeli (University of Debrecen, Hungary)*

- 11:45-12:00 Eszter Tóth, Márton Dencső, Márta Birkás, Györgyi Gelybó: Tillage and mineral fertilizer effects on soil GHG emission in soil column experiment
- 12:00-12:15 Dmitry Khoroshaev, Irina Kurganova, Valentin Lopes de Gerenyu, Vasily Zhmurin: The effect of stimulated extreme climate on the CO<sub>2</sub> efflux from grassland and bare soils: a full-scale field experiment
- 12:15-12:30 Balázs Madarász, Szabolcs Benke, Béla Csepinszky, Krisztina Bádonyi, Gergely Jakab, Zoltán Szalai, Ádám Kertész: Soil and water protection project: effect of conventional and conservation tillage in long-term field trials study in Hungary
- 12:30-12:45 Tibor József Aranyos, Ibolya Demeter, Attila Tomócsik, Viktória Orosz, Marianna Makádi: Long-term effects of a sewage sludge compost treatment on soil physical parameters
- 12:45-13:00 Attila Dunai, Zoltán Tóth: Stability of soil aggregates affected by soil management in a long-term field experiment

*13:00-14:15 Lunch (Advisory building)*

**14:15-15:30 Session 3. Soil microbiology – Main building**  
*Chair: Borbála Biró (Szent István University, Hungary)*

- 14:15-14:30 József Zsembeli, Arzu Rivera-García, Zsádány Zsembeli, Györgyi Kovács, Krisztina Czeller, Géza Tuba: Examination of the effect of soil conditioning on the microbiological activity of three different soil types in a pot experiment
- 14:30-14:45 Alena D. Zhelezova, Mikhail V. Semenov, Timofey I. Chernov, Azida K. Tkhakakhova, Ekaterina A. Ivanova, Olga V. Kutovaya: Prokaryotic communities of Chernozem soil in long-term experiment under three land uses
- 14:45-15:00 Marianna Makádi, Ibolya Demeter, Attila Tomócsik, Viktória Orosz, Tibor József Aranyos: Microbial properties of a sandy soil after regular sewage sludge compost application
- 15:00-15:15 Ibolya Demeter, Marianna Makádi, Tibor József Aranyos, Katalin Posta: Long-term effect of ecological management on microbial activity in sandy soil
- 15:15-15:30 Borbála Biró, Klára Czakóné Vér: Summary of soil-biological assessments of long-term-experiments focusing on the “early warning signals” of heavy-metal toxicity



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#### 14:15-15:30 **Session 4. Plants in long-term experiments – Advisory Center**

*Chair:* Zoltán Tóth (University of Pannonia, Georgikon Faculty, Hungary)

- 14:15-14:30 Tamás Kollár: The long-term forest yield, silvicultural and planting pattern experiment network of the NARIC-FRI
- 14:30-14:45 János Jóvér, Györgyi Kovács, Lajos Blaskó, Csaba Juhász, Elza Kovács: Evaluation of sweet sorghum (*Sorghum bicolor*) hybrids as bioenergy feedstocks in relation to climatic aspects
- 14:45-15:00 István Henzsel, Ágnes Hadházy, Gabriella Tóth, Tamás Sipos, Andrea Györgyiné Kovács: Evaluation of the potato yield in the 90 years Westsik's crop rotation experiment
- 15:00-15:15 Vivien Pál, Ashish Wele, László Zsombik: The evaluation of agronomical parameters of *Pennisetum glaucum* in Hungarian ecological conditions
- 15:15-15:30 Attila Simkó, Szilvia Veres: Single and complex influence of nitrogen and water supply on different maize hybrids production

15:30-16:00 *Coffee break*

#### 16:00-17:00 **Session 5. Soil-plant interaction – Main building**

*Chair:* Péter Pepó (University of Debrecen, Hungary)

- 16:00-16:15 László Simon, Szabolcs Vígh, Zsuzsanna Uri, Katalin Irinyiné Oláh, Marianna Makádi, György Vincze: Accumulation of toxic elements from sewage sludge sediment and wood ash in energy willow grown in a long-term experiment
- 16:15-16:30 Zoltán Tóth, Tamás Kismányoky, Dalma Pribék: Phosphorus balances and P<sub>2</sub>O<sub>5</sub> accumulation in a long-term field experiment applying mineral and organic fertilizers (IOSDV Keszthely)
- 16:30-16:45 Pavel Čermák, Eva Kunzova: Effect of mineral fertilisers and farm yard manure on yield and quality of winter wheat in long-term experiments in the Czech Republic
- 16:45-17:00 Péter Ragályi, Anita Szabó, Anna Gajdó, László Radimszky, Imre Kádár†, Péter Csathó: Alginite application for amelioration of an acidic sandy soil

18:00- **Free time activity:** stories from Nyíregyháza: walk in the city with Gábor Ilyés, a local historian ([www.emlekjelek.hu](http://www.emlekjelek.hu))

20:00-23:00 **Conference dinner at the Hotel Pangea**



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#### 21. November 2019

##### 9:30-10:45 Session 6. Methodology - Main building

*Chair:* Elza Kovács (University of Debrecen, Hungary)

9:30-9:45 Sofia Zhelezova, Olga Savoskina: Long-term field experiments of Russian State Agrarian University – Moscow Timiryazev Agricultural Academy

9:45-10:00 Sviatoslav Baliuk, Mykola Lisovyi, Alina Revtie-Uvarova: The long-term field experiments in Ukraine

10:00-10:15 Kálmán Rajkai: Long-term field experiments for conserving soil's agricultural potential in the Nyírség region

10:15-10:30 Zoltán Berzsényi: On the analysis of long-term experiments: challenges and solutions

10:30-11:15 *Coffee break*

##### 11:15-12:35 Poster session (presentations in max. 5 minutes) - Main building

*Chair:* Tibor József Aranyos (University of Debrecen, Hungary)

Evelin Kármén Juhász, Áron Béni, Andrea Balláné Kovács: Evaluating of changes of nitrogen-, sulphur content and N/S ratio of winter wheat in a long-term fertilization experiment

István Henzsel, Tibor József Aranyos, Andrea Györgyiné Kovács, Gabriella Tóth, Tamás Sipos, Ágnes Hadházy: Role of rye in Phosphorus cycle in the Westsik's crop rotation experiment

Melinda Tar, István Kristó, Katalin Irmes, István Petróczi: The effect of technological intensity and years for grain yield of GK Petur winter wheat in long-term monoculture experiment

Eszter Sugár, Tamás Árendás, Péter Bónis, Nándor Fodor: Effect of non-fertilization on yield components of winter wheat genotypes in long-term experiment in Martonvásár

István Kristó, Melinda Tar, István Mihály Petróczi: Impact of nutrient supply on the yield components of winter wheat

Ladislav Kováč, Pavol Balla, Jana Jakubová, Pavol Porvaz: Effect of soil tillage on grain yields of Hungarian millet (*Setaria italica* L. P.Beauv.) under dry conditions

Eva Kunzova, Pavel Čermák: The nutrition and fertilization of silage maize under different soil-climate conditions in the Czech Republic

Abdel-Moneam, M. A.; M. S. Sultan; W. A. E. Abido; Á. Hadházy; S. E. Sadek; and M. S. Shalof: Investigation of combining ability and superiority percentages for yield and some related traits in yellow maize using line × tester analysis

Abdel-Moneam, M.A. M.H. Ghoneima; W.A.E. Abido; Á. Hadházy; Y.M. EL-Mansy, and M.W. EL-Shazly: Heterobeltiosis and combining ability among egyptian cotton genotypes under well irrigated and water deficit conditions

István Fekete, Áron Béni, Andrea Balláné Kovács, Katalin Juhos, Gábor Várбірó, Marianna Makádi, Ibolya Demeter, Zsolt Kotroczó: Nutrient content changes in a detritus manipulation experiment in a forest ecosystem



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István Henzsel, Andrea Györgyiné Kovács, Gabriella Tóth, Tamás Sipos, Ágnes Hadházy: Effects of different organic manures on the copper content of potato tuber in Westsik's long-term experiment

János Nagy, Endre Harsányi, Árpád Illés, Csilla Bojté, Csaba Bojtor, Tamás Rátonyi: Results of the Complex Long-term Tillage experiment at the University of Debrecen from 1989

Soma Gáspár, László Zsombik, Szilvia Veres: Root growth dynamics of hull-less pumpkin genotypes under different nitrogen nutrition

Mihály Kocsis, Attila Dunai, Zoltán Tóth: Geostatistical processing of the data of the international experiment for investigation the effect of organic and inorganic fertilizers (IOSDV) in Keszthely, Hungary

Pavol Porvaz, Pavol Balla, Ladislav Kováč, Jana Jakubová: Usability of lignocellulosic energy crops for 2<sup>nd</sup> generation biofuel production

János Kátai, Ágnes Zsuposné Oláh, István Henzsel, Marianna Makádi, Magdolna Tállai: Changes of some characteristics in the soil in the Westsik's long-term fertilization experiment

Marianna Makádi, István Szabó, Tamás Árendás, Zoltán Futó, Zoltán Tóth, Dalma Pribék, Gábor Bencze, Tibor József Aranyos, Ibolya Demeter, Bencze Végső, Ádám Imri, Zoltán Daoda: First steps of a new-born long-term experiment on soil microbial inoculation

12:35-14:00 *Lunch (Advisory building)*

**14:00-16:15 Field trip to the long-term experiments**

**16:30-16:45 Closing of the conference** László Zsombik, director

## 22. November 2019

**9:30- Free time activity:** visiting of Jósa András Museum (Szinyei-Merse Pál exhibition)

### SPONSORS OF THE CONFERENCE

