

# LOTEX 2017

INTERNATIONAL CONFERENCE ON LONG-TERM FIELD EXPERIMENTS  
27-28. SEPTEMBER, 2017. NYÍREGYHÁZA, HUNGARY



## 27. September 2017.

8:30-9:30 *Registration*

9:30-9:40 Opening of the conference László Zsombik, director

### 9:40-10:50 **Anniversary ceremony I.**

9:40-10:40 Greetings – Celebration of 90 years anniversary of the Research Institute of Nyíregyháza

10:40-10:50 Investiture of Westsik award

### 10:50-11:50 **Lectures of invited speakers**

10:50-11:20 Tamás Németh (Hungarian Academy of Sciences, Hungary): Long-term experiments: Past, present and future

11:20-11:50 Roberto Mancinelli (Tuscia University, Viterbo, Italy): Sustainable agricultural systems: the relevant importance of "long term experiments" as integrated approach to understand their functioning

### 11:50-12:20 **Anniversary ceremony II.**

11:50-12:00 Appreciation of the life and professional career of Vilmos Westsik.  
László Zsombik, director

12:00-12:20 Wreathing the Statue of Vilmos Westsik, founder of the Westsik crop rotation

12:20-13:50 *Lunch*

### 13:50-15:20 **Session 1. Soil-plant interactions I.**

*Chair:* Marianna Makádi (University of Debrecen, Hungary)

13:50-14:05 Péter Csathó, Tamás Árendás, Klára Pokovai, Anita Szabó: The effect of potassium supply and plant density on corn yield and nutrient content

14:05-14:20 Zsuzsa Erdős: The effect of cropyear and fertilizer method on the spear yield of asparagus (*Asparagus officinalis* L.) hybrid "Grolim" on sandy soil

14:20-14:35 Péter Ragályi, Imre Kádár, László Szemán, Péter Csathó, Péter Csontos: Effect N, P and K fertilization on the succession of an established sward over a decade

14:35-14:50 László Zsombik, Emese Seres: The effect of genotype and nitrogen supply on the agronomical parameters of winter wheat (*Triticum aestivum* L.)

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14:50-15:05 István Henzsel, Ágnes Hadházy: The manganese content of rye yield in Westsik long-term crop rotation experiment

15:05-15:20 László Simon, György Vincze, Zsuzsanna Uri, Katalin Irinyiné Oláh, Marianna Makádi, Tibor Aranyos, László Zsombik, Szabolcs Vigh: Long-term open-field fertilization experiment with energy willow (*Salix* sp.)-experiences of the 2016 year

15:20-15:40 *Coffee break*

## **15:40-16:40 Session 2. Soil biology**

*Chair:* Katalin Posta (Szent István University, Hungary)

15:40-15:55 Márton Dencső, Györgyi Gelybó, Imre Potyó, Ilona Kása, Ágota Horel, Márta Birkás, Eszter Tóth: Soil respiration in a long-term tillage experiment

15:55-16:10 Bente Foereid, Annbjorg Overli Kristoffersen: Effects of repeated digestate applications on soil properties, microbial communities and grain yield

16:10-16:25 Katalin Posta, Franco Magurno, Zoltán Meyer, Zita Sasvári: Long-term field experiments: what about soil microorganisms

16:25-16:40 Marianna Makádi, Attila Tomócsik, Tibor József Aranyos, Bernadett Fehér, József Mészáros, Ibolya Demeter: Effect of 10-year-long sewage sludge compost application on some soil microbial properties

16:40-17:00 *Coffee break*

## **17:00-18:00 Poster session I.**

*Chair:* László Zsombik (University of Debrecen, Hungary)

Nikolett Mazsu, Dóra Szentes, Anita Szabó, Csongor Gedeon, Éva Lehoczky: Influence of long-term fertilization on weed flora diversity in maize cultivation

Éva Lehoczky, Mariann Kamuti, Nikolett Mazsu, Renáta Sándor: Soil moisture changes in a long-term fertilization experiment under maize and maize-weed vegetation

Daniel Diaz Fernández, István Csízi, Géza Nagy: Compost treatment for a sustainable growth in natural grassland in Karcag

Éva Bódi, Szilvia Várallyay, Áron Soós, Emőke Papp-Topa, Béla Kovács: Effect of molybdenum treatment on the element content of maize and green pea in a long-term field experiment

József Zsembeli, Lúcia Sinka, Györgyi Kovács, Géza Tuba, Krisztina Czeller, Csaba Juhász: Carbon-dioxide emission of the soil in the long-term soil cultivation experiment at Karcag

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Orsolya Gazdag, Tünde Takács, László Ködöböcz, Márton Mucsi, Ilona Villányi, Tibor Szili-Kovács: Comparison of the different land use management at Martonvásár by soil metabolic activity profiles

Ravi Kumar Gangwar, Jaspal Singh, Marianna Makádi, Tamás Szegi: Response of microbial biomass and it's activity to seasonal changes salt affected soils of India

Szilvia Veres, Attila Simkó: Studies on photochemical activity changes in maize

Attila Simkó, Karina Bodnár, Szilvia Veres: Investigation of NDVI index and SPAD value in relation to chlorophyll content in maize

Soma Gáspár, László Zsombik, Szilvia Veres: Effect of nitrogen nutrition on some physiological parameters of different medicinal pumpkin genotypes

Dóra Frommer, László Radócz, Szilvia Veres: Changes of relativ chlorophyll content in corn smut infected sweet corn

Ana Teodora David: Some relevant results from the ards livida long-term field experiments

István Henzsel, Gyuláné Györgyi: Dry matter content of potato tuber in Westsik long-term crop rotation experiment

Maryna Kryvtsova, Nadija Bobrik, Angela Kolesnik, László Simon: Microbiota of upper soil in a long-term open-field fertilization experiment with energy willow (*Salix sp.*)

**19:00-23:00 Conference dinner at the Hotel Central**

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## 28. September 2017.

### 9:00-10:00 Lectures of invited speakers

9:00-9:30 Márton Jolánkai (Szent István University, Hungary): Agronomic benefits of long term trials

9:30-10:00 József Zsembeli, Krisztina Czeller, Lúcia Sinka, Györgyi Kovács, Géza Tuba (University of Debrecen, Hungary): Application of lysimeters in soil management

10:00-10:20 *Coffee break*

### 10:20-11:35 Session 3. Soil-plant interactions II. Soil physics and chemistry.

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

10:20-10:35 Andrea Balla Kovács, Evelin Juhász, Ida Kincses, Orosz Tóth Mihály, János Kátai, János Nagy, Tamás Rátonyi – Changes of some characteristics of soil by the effects of chemical fertilization and irrigation in a long term field experiment

10:35-10:50 József Tibor Aranyos, Attila Tomócsik, Lajos Blaskó, József Mészáros, Marianna Makádi: Soil physical measurements in a long-term sewage sludge compost experiment

10:50-11:05 Attila Tomócsik, József Tibor Aranyos, Viktória Orosz, György Füleky, József Mészáros, Marianna Makádi: 14-year-long application of a sewage sludge compost: changes in soil chemical properties and in crop yield

11:05-11:20 Veronika Tótok: The role of Westsik long-term experiment in greening

11:20-11:30 János Jóvér, Elza Kovács, Péter Riczu, János Tamás, Lajos Blaskó – Spatial decision support for crop structure adjustment- a case study for selection of potential areas for sorghum (*Sorghum bicolor* (L.) moench) production

12:30-13:50 *Lunch*

### 13:50-14:20 Poster session II.

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

Danka Kotorová, Ladislav Kovács, Jana Jakubová, Pavol Balla: Long-term effect of tillage methods on physical properties of heavy soil

Ladislav Kovács, Danka Kotorová, Jana Jakubová, Pavol Balla: The economy of millet cultivation on heavy soils

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Tamás Árendás, Péter Bónis, Eszter Sugár, Györgyi Micskei, Csaba L. Marton, Zoltán Berzsényi, Nándor Fodor: Productivity of maize in three-factor monoculture long-term experiment set up in Martonvásár

Eszter Sugár, Tamás Árendás, Péter Bónis, Zoltán Berzsényi: Effect of nitrogen fertilization on the yield and growth of winter wheat varieties

László Kiss, László Zsombik, Szilvia Veres: Study of yellow rust infection on various winter wheat genotypes

Ildikó Béltéki, Szilárd Tóth, Sándor Holló, Andrea Ambrus: Effect of climatic factors on yield of maize in long-term fertilization experiment

**14:20-14:30 Closing of the conference**

László Zsombik, director (University of Debrecen, Hungary)