

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 Nikolay Patyka, Gabriel Spassky, Sergei Kvasha, Aleksandr Kolodjazhnyi, Andrei Klyuvadenco, Aleksandr Subin, Sergei Veretyk, Tatyana Patyka Conceptual bases of formation the mechanisms of recovery and management of soil fertility on long-term field experiments

16:40-16:55 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

16:55-17:15 *Coffee break*

17:15-18:00 Poster session I.

Chair: László Zsombik (University of Debrecen, Hungary)

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

Éva Lehoczky, 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

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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

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 its activity to seasonal changes in 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 relative 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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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 Bélteki, 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)