

5th International Scientific Conference on Water

Orginizers



Hungarian University of Agriculture and Life Science
Institute of Environmental Sciences,
Research Center for Irrigation and Water Management and
Research Center for Fisheries and Aquaculture
Hungary

Co-Organizers



Banat's University of Agricultural Sciences and Veterinary
Medicine "King Michael I of Romania" from Timisoara Faculty
of Agriculture and Faculty of Management and Rural Tourism,
Romania



**POLITECHNIKA
BYDGOSKA**
im. Jana i Jędrzeja Śniadeckich

Bydgoszcz University of Science and Technology Faculty of
Agriculture and Biotechnology, *Poland*



University of Novi Sad
Faculty of Agriculture
Serbia

22-24 March 2022, Szarvas, Hungary

**PROGRAM OF THE
5TH INTERNATIONAL SCIENTIFIC CONFERENCE ON WATER
SZARVAS, HUNGARY**

22nd March 2022 (Tuesday)

9.00 – 10.00 Registration, Coffee break

Moderator: BRLÁS-MOLNÁR Zsuzsanna

Opening Ceremony

10.00 – 10.05 Opening of the conference (Prof. Dr. GYURICZA Csaba, rector MATE)

10.05 – 10.10 Conference greeting (Prof. Dr. Cosmin Alin POPESCU, rector, USAMVBT)

10.10 – 10.15 Conference greeting (Prof. Dr. URBÁNYI Béla, Director of Szent István Campus, MATE)

10.15 – 10.20 Conference greeting (Prof. Dr. MICHÉLI Erika, Director of Institute of Environmental Sciences, MATE)

10.20 – 10.25 Conference greeting (Prof. Dr. Branko CUPINA, vice dean, University of Novi Sad Faculty of Agriculture)

10.25 – 10.30 Conference greeting (Dr. Piotr PRUS, ass. professor, Bydgoszcz University of Science and Technology Faculty of Agriculture and Biotechnology)

Plenary session:

10.30 – 10.55: Eduardo Jimmy P. QUILANG, Kristine SAMOY-PASCUAL: Coping with water scarcity for rice production in the Philippines: Advancement and Challenges in Rice R&D

10.50 – 11.15: Milica VRANESEVIC: Statistical analysis of excess water on drainage systems in northern part of Serbia

11.15 – 11.40: Peter STRAUSS: Introduction to the Hydrological Open Air Laboratory (HOAL) Petzenkirchen, Austria. Soil erosion and sediment transport

11.40 – 12.05: Piotr PRUS, Małgorzata SZCZEPANEK, Dariusz PAŃKA, Roman ROLBIECKI: Innovative solutions in agriculture and rural areas - selected case studies

12.05 – 12.30: HALASI-KOVÁCS Béla: Finding breakthrough points in European freshwater aquaculture

12.30 – 12.55: Endre DOBOS, Erika MICHÉLI, Tamás SZEGI: The impact of soil structural degradation on the soil moisture holding capacity

12.55 – 13.00 Opening Poster session (moderator: Dr. Károly BODNÁR, MATE)

13.00 – 14.00 Lunch

Water use in agriculture session (Chairs: Dr. Laura SMULEAC and Dr. Csaba BOZÁN):

14.00 – 14.15: Florent Demelezi: Aquacrop model evaluation for irrigation in the winter wheat cultivars under Hungarian climate

14.15 – 14.30: Arzu Rivera Garcia, Sinka Lúcia, Kovács Györgyi, Zsembeli József, Tuba Géza: Correlation of secondary salinization and soil conditioning in vegetable production under irrigation with saline water

- 14.30 – 14.45: Dumitrescu Carmen Simona, Salasan Cosmin, Sorin Stanciu, George Popescu: Romanian agriculture and irrigations
- 14.45 – 15.00: Varga Krisztina, Csizi Istvan, Halasz Andras: Reasons of meadow hay scarcity in Karcag region
- 15.00 – 15.15: Jancsó Mihály: Evapotranspiration of aerobic rice in large weighing lysimeter

15.15 – 15.30 Break

- 15.30 – 15.45: Valkovszki Noémi Júlia: Influence of agricultural effluent irrigation on common purslane (*Portulaca oleracea* L.) and garden basil (*Occimum basilicum* L.): preliminary results
- 15.45 – 16.00: Kerezsi György: Examination of red clover optimum harvesting status in seed production with unmanned aerial systems
- 16.00 – 16.15: Bozóki Boglárka, Kovács Gergő Péter, Birkás Márta, Kende Zoltán, Gyuricza Csaba: The effects of tillage practices on water management of soybean (*Glycine max* L.)
- 16.15 – 16.30: Szalacsi Norbert: Evaluation of the effect of Water Retainer on soil moisture and nutrient contents in apple orchards

16.45 – 17.00 Coffee break

Environmental protection and climate change session (Chairs: Dr. Andrea FEHER and Dr. Béla GOMBOS)

- 17.00 – 17.15: Toader Cosmina-Simona, Brad Ioan, Feher Andrea Ana, Sîrbu Constanța Corina, Sîrbulescu Claudia: Aspects regarding the evolution of Romanian businesses related to collection of non-wood forest products from spontaneous flora
- 17.15 – 17.30: Dekany Alexandru Tiberiu, Zoican Eugen Cătălin, Petroman Ioan: Greening the management and improving the environmental management from the perspective of sustainable development
- 17.30 – 17.45: Huzău Gelu, Zoican Eugen Cătălin, Petroman Cornelia: Measures to reduce liquid and groundwater pollution from the area of professional swine farms
- 17.45 – 18.00: Văduva Loredana Florina, Zoican Eugen Cătălin, Tarpian Denisa: Implementation of new environmental risk management programs in professional animal farms

18.00 Dinner

23rd March 2022 (Wednesday)

Water management (Chairs: Dr. Cosmin SALASAN and Dr. Zoltán FUTÓ)

- 9.00 – 9.15: Atila Bezdán, Milica Vranešević, Boško Blagojević, Jovana Bezdán: Inland excess water risk assesment in Vojvodina Province
- 9.15 - 9.30: Nataša Čereković, Mihajlo Markovic, Mladen Todorovic, Nery Zapata, Teresa Paco, Erminio Efisio Riezzo, Sabrija Cadro: Smart water management in Bosnia and Herzegovina, SMARTWATER project

- 9.30 – 9.45: Cosmin Salasan: Local Knowledge Transmission - importance, dynamics and prospects
- 9.45 – 10.00: Tamás János: Key infrastructure for agricultural water management
- 10.00 – 10.15: Nagy Attila: Sustainable solutions in integrated water management of small agricultural catchments

10.15 – 10.30 Coffee break

- 10.30 – 10.45: Malek Abidli, Gabor Halupka, István Waltner: Soil moisture dynamics of an urban park of Budapest, Hungary
- 10.45 – 11.00: Vinicius Deganutti de Barros, Malek Abidli, Dana Kaldybayeva, István Waltner: Comparative evaluation of the AquaCrop and Hydrus 1D models at Gödöllő, Hungary
- 11.00 – 11.15: Mohammed Zein: Detection of some physical soil properties based on the mid-infrared spectral library: Salt affected soils type, Hungary
- 11.15 – 11.30: Brian Rotich Kanyongi: Soil and Water Conservation in Kenya; practices, challenges, and prospects
- 11.30 – 11.45: Caleb Melenya Ocansey: Water balance in Lake Volta and factors determining sustainable use of the reservoir
- 11.45 – 12.00: Magyar Tamás, Pásztor Dávid, Fehér Zsolt Zoltán, Budayné Bódi Erika, Tamás János, Nagy Attila: Modelling the water budget of agricultural fields for precision irrigation scheduling

12.00 – 13.00 Lunch

Environmental protection and climate change session (Chairs: Dr. Ciprian RUJESCU and Mihály JANCSÓ)

- 13.00 – 13.15: Ciprian Rujescu, Adrian Firu: Statistical analysis of recent water supply developments in Romania
- 13.15 – 13.30: Vlad Mărăzan, Antoanela Cozma: Improving weather forecast accuracy using the Doppler radar – cross referential analysis of the 2018 convective season and the impact on agriculture
- 13.30 – 13.45: Hunor Vass, Bogdan Şonca, Oana Sicoe-Murg, Camelia Mănescu, Teodor Mateoc, Nicoleta Mateoc-Sîrb: Preventing the effects of climate change by planting protective curtains
- 13.45 – 14.00: Abidi Sahar: Impact of hydric erosion on soil fertility – Case study of Zouitina basin (Tabarka, Tunisia)
- 14.00 – 14.15: Tóth Flórián: The impact of aquaculture effluent on rotifer communities of a continental lowland oxbow lake
- 14.15 – 14.30: Szanyi Kálmán: Attractivity of light sources with different spectra on caddisfly (*Trichoptera*) species
- 14.30 – 14.45: Elena Claudia Sirbulescu, Cosmina Toader, Ciprian Rujescu, Andrea Feher, Luminita Pirvulescu: Analysis of the investments for environmental protection and sustainable economic development
- 14.45 – 15.00: Oana Maria Sicoe-Murg, Teodor Mateoc, Ana-Mariana Dincu, Vass Hunor, Nicoleta Bodea: Study regarding the impact of the pandemic on tourist reception structures from Geoagiu Băi area, Hunedoara County
- 15.00 -15.15: Simona Cristina Constantinescu, Carmen Simona Dumitrescu, Manuela Dora Orboi, Sabin Chis: Correlation of the quality of spa tourist services with consumer behaviour

Soil moisture monitoring, mapping and modelling session (Chairs: Dr. Endre DOBOS and Dr. István WALTNER)

- 15.15 – 15.30: Rajhi Mohamed, Endre Dobos: Soil moisture monitoring using remote sensing tools
- 15.30 – 15.45: Károly Zoltán Kovács, Anett Poss, Endre Dobos: Citizen science based soil moisture monitoring development
- 15.45 – 16.00: Károly Zoltán Kovács, Endre Dobos: Low-cost sensor application on vineyard's soil moisture-management
- 16.00 – 16.15: András Dobai, Endre Dobos: The impact of soil structural degradation on the soil moisture holding capacity
- 16.15 – 16.30: Daniel Kibirige, Endre Dobos: Estimation of soil moisture using environmental covariates and speckle filtered satellite imagery
- 16.30 – 16.45: János Vágó, Endre Dobos: Development of a GIS based decision support toolset for flood cross management
- 16.45 – 17.00: András Dobai, Endre Dobos: Methodological development of flash flood risk analysis for small catchments

POSTER SESSION

(Chair: Dr. Károly BODNÁR)

Giancarla Velicevici, Petru Dragomir, Olimpia Iordanescu, Emilian Madosa: The effect of salinity on the chlorophyll content of a wheat variety

Adriana Ciulca, Dorin Camen, Mihaela Moatar, Sorin Ciulca, Sorina Popescu: Assessment of Some Morphological and Physiological Parameters in Lettuce (*Lactuca sativa L.*) Cultivated in Hydroponic System

Miroslav Raicov, Andrea Feher, Adrian Banes, Paun Ion Otiman: Possibilities for optimizing the irrigation system in Romania

Kolozsvári Ildikó, Kun Ágnes, Jancsó Mihály, Bakti Beatrix, Valkovszki Noémi J., B. Oncsik Mária, Bozán Csaba, Gyuricza Csaba: Macro-, mesoelement and sodium content of plant parts of energy willows irrigated with effluent water of agricultural origin

Tar Melinda: The effect of crop year precipitation and seed treatment on the yield and quality of soybean varieties

Rácz Attila: The effect of cereal-legume plant associations on the soil microbial community

Kun Ágnes, Kolozsvári Ildikó, Jancsó Mihály, Túri Norbert, Bozán Csaba: Effect of irrigation and water quality on the physiological status of sugar beet and fodder beet using SPAD-502 chlorophyll meter

Bakti Beatrix: Experiences of growing temperate aerobic rice as an intermediate crop in an irrigated bioenergy-agroforestry system

Vályi-Nagy Marianna: Yield stability of winter wheat in intercrop makes better adaptation to climate conditions

Kristó István: Effect of precipitation on the nutrient reaction of triticale varieties

Kun Ágnes, Palást Ádám, Keserű Zsolt, Jancsó Mihály, Török Csilla, Sóvágó Emese, Kolozsvári Ildikó, Gyuricza Csaba, Bakti Beatrix: Investigation of the effect of plant and soil conditioners on irrigated agroforestry system (industrial poplar plantation; alfalfa)

Tóth Florence Alexandra, Nagy Péter Tamás: Study of effect of added fermented chicken manure products on water and nutrient uptake of tomato in small pot experiment

Dana Kaldybayeva, Gábor Halupka, Zsuzsanna Harkányiné Székely, István Waltner: Analysis of vegetation dynamics and geomorphometric variables in the Rákos watershed, Hungary

Bencze Gábor, Komlósi Ádám, Futó Zoltán: Comparative experiment of various irrigation technologies in maize (*Zea mays L.*)

Komlósi Ádám, Bencze Gábor, Futó Zoltán: Examination of water and salt stress for five different maize hybrids

Patrik Krizsán, Gábor Balázs: Investigation of different nutrient levels applied during irrigation in the self-rooted and grafted watermelon production

Phenson Nsima Justine: Irrigation Techniques and their Performances in Tanzania Agricultural Sector

Mustapha Abdulkadir: Desertification conditions and its management in Gombe State Northeastern Nigeria: A Review

Andreea Adriana Petcov, Buzdugan Emilia, Botos Andreia, Orboi Dora Manuela, Camen Dorin, Pascalau Raul: The influence of ammonium present in surface groundwater from Gradinari village, Caras Severin county, Romania, on the mitotic development cycle in *Allium sativum L.*

Tibor Zsigmond, Levente Czelnai, Ágota Horel: Soil water contents and slope positions influences the spectral reflectance of vegetation

Forrai Sándor József: Assembly of remedy equipment in case of oil pollution of rivers and channels

Gombos Béla, Szalókiné Zima Ildikó, Csengeri Erzsébet: Characteristics of groundwater level in the Szarvas-Békésszentandrás Oxbow Subbasin

Andrea Feher, Ioan Brad, Cosmina Toader, Claudia Sirbulescu, Miroslav Raicov, Adrian Banes, Gabriel Suster: Analysis of the precipitation level in Romania in the context of climate change

Kovács Róbertné, Wang Chao-Tang, Nagy Valéria: Marginal note on wastewater recycling margins from the perspective of simultantism of sustainability and technological development

Georgeta Sofia Popescu, Florina Radu, Lia Rotariu, Mihaela-Maria Stanciugelu, Maria-Ionela Spafiu: Water in food - The methods of quantitative determination

Attila Blenesi-Dima, Radu Bertici, Daniel Dorin Dicu: References regarding the influence of the land reclamation works on the low field of Denta village in the climate change context

Sahar Saeidi, János Grósz, Zsuzsanna Harkányiné Székely, István Waltner: The effects of land use and landcover on water quality in the Rakos catchment, Hungary

Zorica Srđević, Istvan Waltner, Bojan Srđević, Vinicius Deganutti De Barros, Pavel Benka: The rainless periods in Central Hungary as stochastic process of extremes

Betim Bresilla, Marat Fuchs, Eszter Kovács, Adam Csorba, Tamas Szegi: Soil water retention of vertisols under different land uses in Kosovo

Mozsgai Katalin: Experiences of the water protection efficiency of the agri-environmental measures in the Hungarian Rural Development Program

Adedapo Orekoya, George Mensah, Wudu Abiye, Mohamed S. Abdelalim, Staden Mirembe, István Waltner: Spatial analysis of soil penetration resistance for a field in Gödöllő, Hungary

Dima Alrahaife, Elsadig B.M. Omer, Jomana A. Alrwashdeh, Housseem E. Haroun, János Grósz, István Waltner: Comparison of survey- and photogrammetry-based elevation models for a field in Gödöllő, Hungary

András Dobai, Anna Seres,, János Vágó, András Hegedűs, Károly Zoltán Kovács, Endre Dobos: Demonstration of a drainagemodel: testing the capacity of an urban rainwater drainage system

Péter Pecsmány, András Hegedűs, János Vágó: The relationship between the drainage network and geological structures in the northern foreland of Bükk Mountains

János Vágó, Endre Dobos: Development of a GIS based decision support toolset for flood crosos management

Tamás Deák, Károly Zoltán Kovács, Endre Dobos: Calculation of soil moisture infiltration intensity using high-tech Sentek sensors

Berbecea Adina, Radulov Isidora, Imbrea Iilnca, Hotea Ionela, Crista Florin: Heavy metals pollution in water - sources, behaviour and risks. An overview on cadmium, chromium and lead

Crista Florin, Lato Alina, Zaric Nenad, Botos Lucian, Batrana Stefan, Banatean-Dunea Ioan: natural resources condition in river's hydrographical basins situated in Romania-Serbia cross-border area

Ciolac Ramona, Iancu Tiberiu, Brad Ioan, Pirvulescu Luminița, Mateoc-Sîrb Nicoleta, Popescu Gabriela, Adamov Tabita, Marin Diana: Romanian agritourism - an old and still fashionable form of tourism

Adamov Tabita Cornelia, Iancu Tiberiu, Pirvulescu Luminita, Peț Elena, Mateoc-Sirb Nicoleta, Popescu Gabriela, Ciolac Ramona, Șuba Anka, Gordan Marius: General aspect that characterize the regional economy of the West Region

Dincu Ana-Mariana, Balan Ioana-Mihaela, Raba Diana Nicoleta, Sicoe-Murg Oana: The impact of the covid-19 pandemic on romanian tourism

Ioana Anda Milin, Elena Pet, Marius Gordan: Aspects regarding the transactions with wheat at the Romanian Commodity Exchange in 2021

Popescu Gabriela, Dumitrescu Carmen, Iancu Tiberiu, Brad Ioan, Adamov Tabita, Ciolac Ramona, Iosim Iasmina: Băile Herculane, a pearl of the Romanian balneotourism heritage - past and present

Anka Roxana Suba, Marius Gordan, Iasmina Iosim, Tabita Cornelia Adamov, Tiberiu Iancu: Aspects of agricultural production processes in the Western part of Romania

Bodnár Károly: Moneasa, a spa of the Austro-Hungarian monarchy

Ado Yakubu, Shukurat Adunni Sanni, Cosmina Simona Toader, Andrea Feher: Parallel study on the level of agricultural development in the Western Development Region from Romania and the North West Region of Nigeria

Muhammad Shaker Ahmed, Beredugo Moses: Dearth of water: Threat to human health in Bangladesh and Nigeria

Bodnár Károly: Study of drinking water consumption patterns of consumers

Elena Peț, Tabita Adamov, Anda Milin, Adelina Vening, Ioan Peț: Study on the milk market in Romania

Florina Radu, Sofia Popescu, Lia Rotariu: The impact of Water Quality in the Romanian Dairy Industry

Mirela Ahmadi, Ioan Pet, Lavinia Stef, Gabi Dumitrescu, Liliana Petculescu-Ciochina, Marioara Nicula-Neag, Adela Marcu, Dorel Dronca, Florica Morariu: Metabolic water in animals' organism

Gergő Gyalog, Julieth P. Cubillos T.: Aquaculture growth rates correlates with quantity of renewable water resources at country-level

Ribács Attila: Investigation of some factors influencing the water intake by dairy cows

Buday-Bódi Erika, Tamás János, Nagy Attila: Agricultural water management international education programmes at the University of Debrecen

Hortensia Radulescu, Laura Smuleac, Anisoara Ienciu: Impact of intensive system agriculture on depth water quality

Vekerdy Zoltán, Tolnai Márton, Bihari Zita, Waltner István, Gerhard Triebnig, Boudewijn van Leeuwen, Egri Péter, Takács Katalin, Florent Demelezi, Yohannes G. Mariam, Bozán Csaba: Water Management Data Cube

Berbecea Adina, Radulov Isidora, Imbrea Ilinca, Hotea Ionela, Crista Florin: Heavy metals pollution in water - sources, behaviour and risks. An overview on cadmium, chromium and lead

Crista Florin, Lato Alina, Zaric Nenad, Botos Lucian, Batrana Stefan, Banatean-Dunea Ioan: natural resources condition in river's hydrographical basins situated in Romania-Serbia cross-border area

17.00 - Closing of the conference

18.00 Dinner

24th March 2022 (Thursday)

9.00 – Visit to the Arboretum of Szarvas (optional)

Departure

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