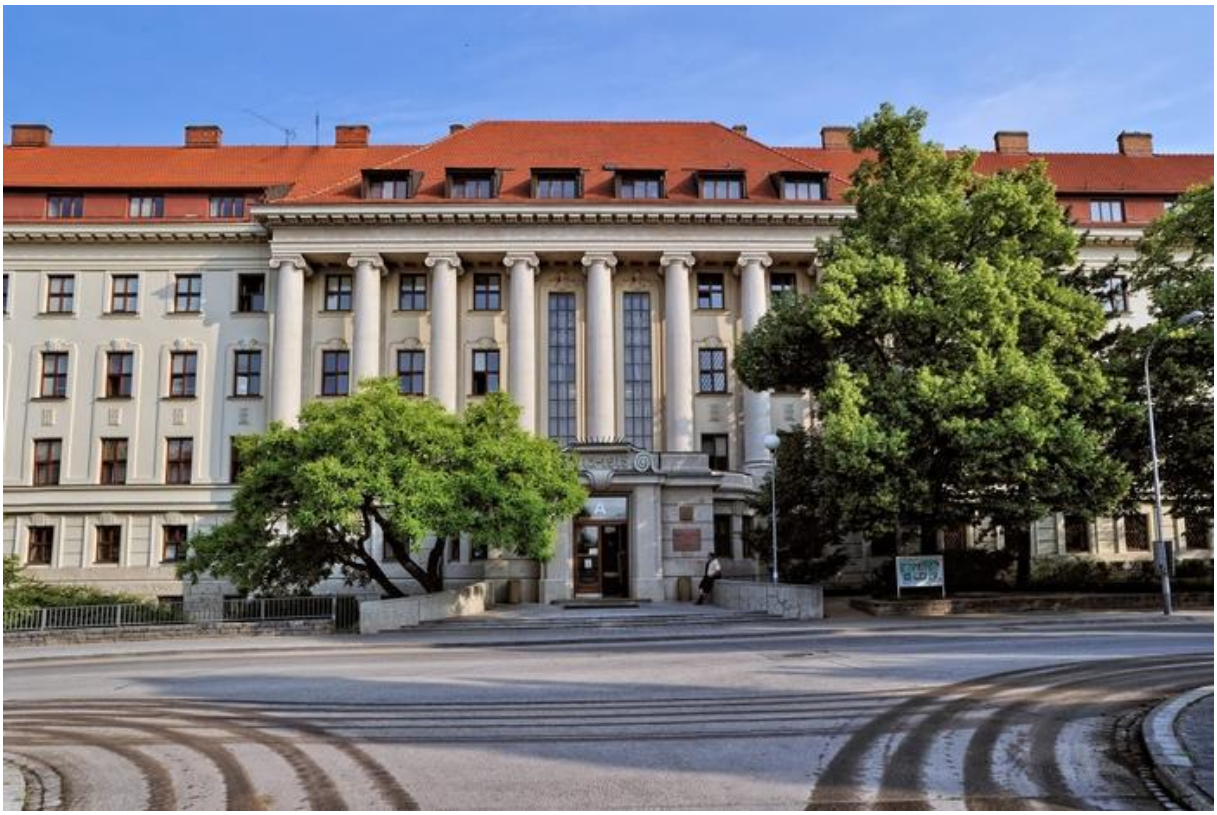
Conference brochure

First announcement



2nd Central European ISTRO Conference (CESTRO)

8 – 10 September, 2020
Brno, Czech Republic

e-mail: istro.czech@gmail.com

www.istro.cz

ISTRO CZ
Czech branch of ISTRO

CROSTRO
Croatian branch of ISTRO

HUISTRO
Hungarian branch of ISTRO

under the auspice of

ISTRO International Soil and Tillage Research Organisation

and in cooperation with

MENDELU Faculty of AgriSciences

VÚRV Crop Research Institute, Prague
Knowledge for sustainable agriculture

CAAS CZECH ACADEMY OF AGRICULTURAL SCIENCES

VUPT Research Institute for Fodder Crops, Ltd. Troubsko

Research Institute for Soil and Water Conservation

Česká pedologická společnost Czech Society of Soil Science CPS

ORGANIZE

2nd Central European ISTRO Conference (CESTRO)
and
8th International Conference of the Czech ISTRO branch

Trends and challenges in soil-crop management

8 – 10 September 2020, Brno, Czech Republic

INVITATION

On behalf of the Organizing Committee of the Czech branch of ISTRO (ISTRO CZ), the Croatian Soil Tillage Research Organization (CROSTRO), and the Hungarian branch of ISTRO (HUISTRO), under the auspice of the International Soil Tillage Research Organization (ISTRO) and other supporting institutions:

Mendel University in Brno, Faculty of Agrisciences (CZ)

Research Institute for Fodder Crops, Ltd. Troubsko (CZ)

Crop Research Institute, Prague (CZ)

Research Institute for Soil and Water Conservation (CZ)

Czech Academy of Agricultural Sciences (CZ)

Czech Society of Soil Science (CZ)

Serbian Soil Tillage Research Organization (SRB)

we are pleased to invite you to the International Scientific Conference that will take place in Brno, Czech Republic, 8 – 10 September, 2020.

For the second time since the establishment of our national branches, the Czech Republic, Croatia, and Hungary are going to organize the 2nd Central European ISTRO Conference (CESTRO) as a joint scientific Conference. From this point of view, we have established a new platform, but on the other hand, we already have quite a long history because it is also the 8th International Conference of the Czech ISTRO branch.

The primary objective of the conference is the promotion, development and growth of interest and knowledge about soil-crop management, exchange of ideas about trends and challenges in modern agriculture. This conference, created for both the scientific community as well as experts coming from praxis, will cope with the main goals of ISTRO. The conference represents a unique opportunity for learning and exchanging opinions on different topics, which could be helpful in harmonizing soil and plant health in agroecosystems all over the world.

The conference is also held at the occasion of the 50th anniversary of founding the long-term field experiment with spring barley monoculture (in Žabčice, South Moravia, Czech Republic).

This experiment was established in 1970. Experimental factors are soil tillage, straw management and nitrogen fertilization. Throughout all experiments, grain yields and yield formation are monitored. Soil properties are evaluated - the basic soil physical properties, as well as the soil structure, organic matter and changes in nutrients.

The conference is supported by Ministry of Agriculture of the Czech Republic, National Agency for Agricultural Research. Results from research projects No. QK1810186 and QK1910334 will be presented during the conference programme.

Vladimír Smutný, president of Czech branch of ISTRO
Danijel Jug, president of Croatian branch of ISTRO
Márta Birkás, president of Hungarian branch of ISTRO

ABOUT THE CONFERENCE

Soil is an ecosystem that can be managed to provide nutrients for plant growth, absorb and hold rainwater for use during periods of drought, filter and buffer potential pollutants from leaving our fields, serve as a firm foundation for agricultural activities, and provide a habitat for soil microbes to flourish and diversify to keep the ecosystem running smoothly. Healthy soil is the foundation for profitable, productive, and environmentally sound agricultural systems.

European farmers have to adapt to the changing climate which often implies changes in crop management practices and a diversification of income sources. Extreme weather and climate events (including droughts and heat waves) can greatly reduce the yield of some crops. The projected increase in the occurrence of such events is expected to increase the risk of crop losses, with consequent increases on food prices and reduction of food security. There are opportunities for implementing a wide variety of existing measures at the farm level that aim to improve the management of soils and water, which can provide benefits for adaptation, mitigation, as well as the environment and the economy.

TOPICS/SESSIONS

1. Soil health assessment

The quality of soil is essential to efficient crop production and environmental health because it plays many key roles for the ecosystem. This session is based on an interdisciplinary approach involving soil scientists to characterize the dynamic and living soil–water–plant–atmosphere system. Essential soil properties include physical (i.e., texture, structure, available water holding capacity, water infiltration rate, bulk density, soil aggregate stability, effective rooting depth), chemical (i.e., pH, cation exchange capacity or CEC, nature of exchangeable cations, intensity and capacity of plant available nutrients, electrical conductance and the concentration of soluble salts), and biological (i.e., soil organic carbon concentration and stock, microbial biomass carbon, activity and species diversity of micro and macro flora and fauna).

2. Soil management

Soil management is an integral part of land management and focuses on differences in soil types and soil characteristics to define specific interventions that are aimed to enhance the soil quality and fertility. Specific soil management practices are needed to protect and conserve the soil's resources. Specific interventions also exist to enhance the carbon content in soils in order to mitigate climate change. Reversing the degradation of soil, water and biological resources and enhancing crop and livestock production through appropriate land use and soil management practices are essential components in achieving food and livelihood security. There are various farming system approaches which differ in productivity and environmental impacts. Conservation agriculture, as a perspective direction for the future, has three main practices: minimizing soil disturbance, maintaining permanent soil coverage, and diversifying crops. For this reason, conservation tillage is a suitable approach of soil cultivation that leaves the previous year's crop residue on fields before and after planting the next crop

to reduce soil erosion and runoff, as well as other benefits such as carbon sequestration. Cover crops play an important role in this system as well.

3. Integrated pest management

Integrated pest management (IPM) is a farming system dealing with the effective protection against diseases, pests and weeds, which ensures a stable yield and production of quality agricultural products while emphasizing the reduction of the impact of pesticides on human health and the environment. IPM includes preventive tools (crop rotation, soil tillage and seedbed preparation, nutrient management and fertilization, choice of suitable varieties), monitoring and forecast of harmful organisms and direct methods (biological, mechanical and chemical) based on determination threshold levels that could cause economic damage.
IPM is an important topic for the year 2020 which was declared as the **International Year of Plant Health** (IYPH) by FAO. The year is a once-in-a-lifetime opportunity to raise global awareness on how protecting plant health can help end hunger, reduce poverty, protect the environment, and boost economic development.

4. Precision agriculture

Precision agriculture (PA) or precision farming, is a modern farming management concept using digital techniques to monitor and optimise agricultural production processes. Rather than applying the same amount of fertilizers over an entire agricultural field, PA will measure variations in conditions within a field and adapt its fertilising or harvesting strategy accordingly. PA methods promise to increase the quantity and quality of agricultural output while using less input (water, energy, fertilisers, pesticides, etc.). The aim is to save costs, reduce the environmental impact and produce more food that is better in quality.

PRACTICAL INFORMATION

The official language of the Conference will be English (without translation).

The conference scientific programme will include oral and poster presentations on four conference topics.
Poster presentation – the poster boards will be A0 size. Posters will be on display during the conference days, and will be introduced to the audience in 5-minute presentations. The best posters presented by young scientists (under 30 years of age) will be awarded by the Scientific Board.

If you have any questions or observations do not hesitate to contact us via e-mail: istro.czech@gmail.com

ABSTRACT SUBMISSION

Every conference participant, who wish to prepare an oral or poster presentation, must submit an abstract. The Scientific Board will evaluate all abstracts and will inform the participants about the acceptance/rejection of the abstract afterward.

All accepted abstracts will be published in the Conference Book of Abstracts in electronic form. An abstract should be prepared in Abstract template and has to be send to e-mail: istro.czech@gmail.com directly after registration. Please name your file following way: **yourfamilyname_CESTRO_2020.doc. Only in this way is the registration complete.**

OPPORTUNITY FOR PRESENTING A SCIENTIFIC PAPER IN AGRICULTURAE CONSPECTUS SCIENTIFICUS

Authors of abstracts (conference participants with oral or poster presentations) who decide to publish their whole papers in the ACS – **Agriculturae Conspectus Scientificus** scientific journal should prepare a manuscript according to ACS Journal-Author Guidelines for the CESTRO 2020 special issue. The prepared manuscript should be submitted in electronic form via the paper submission system on the ACS Journal website before the due date. Every submitted manuscript is obligated to include the "CESTRO-2020" annotation. Authors will be informed about the manuscript evaluation process.

The Agriculturae Conspectus Scientificus (ACS) is an international journal that publishes original scientific papers, scientific reviews and preliminary communications in the field of agricultural and related sciences. The ACS is the oldest and the most prominent agricultural journal in Croatia established in 1887 as "Viestnik za gospodarstvo i šumarstvo". The ACS is published by the Faculty of Agriculture, University of Zagreb and supported by the Ministry of Science, Education and Sports of the Republic of Croatia. Journal is indexed in SCOPUS database.

REGISTRATION

Registration will be open from 1 February 2020.

REGISTRATION FEE (in Euros)

Conference participant			Accompanying person
ISTRO member	NON ISTRO member	Student	
200	250	100	150

The registration fee is compulsory for all conference participants. Registration fees cover the following services: conference attendance in scientific programme (conference e-book of abstracts, accepted ACS Journal full paper publishing), professional field trip and excursion, welcome reception, lunches, beverages during conference breaks and the gala dinner.

Accompanying persons are similarly to the conference participants also warmly welcome. We will organize a pleasant stay with a rich social programme, giving them the opportunity to enjoy Brno, as well as discover the culture and the history of the South Moravian region.

Payment of registration fee

After online registration, by bank transfer only. All banking fees should be covered by the registrants. Upon request invoices will be sent to registrants. For more information: istro.czech@gmail.com

Customer: ISTRO CZ, z.s.

Address: Zahradní 400/1, 664 41 Troubsko

Bank name: UniCredit Bank

Address: Úzká 488/8, 602 00 Brno, Czech Republic

IBAN: CZ40 2700 0000 0020 3398 7031

SWIFT: BACXCZPP

Comment: indicate CESTRO_2020_YOUR PARTICIPANT NAME! *(means family name)*

Registration payment deadline: 31 May 2020

ACCOMMODATION

Accommodation will be available in various hotels in Brno.

IMPORTANT DATES

01 April 2020 – registration and submission of abstracts
15 April 2020 – acceptance notifications of abstracts
31 May 2020 – payment deadline
30 June 2020 – submission of full paper (for ACS Journal)
30 September 2020 – acceptance notification for full paper publication (ACS Journal)

CONFERENCE VENUE

The conference will be held on the campus of Mendel University in Brno (MENDELU), Zemědělská 1665/1, 613 00 Brno, Czech Republic (GPS: 49.2102089N, 16.6158772E). Brno is a city in the South Moravian Region, approximately 200 km southeast of Prague, 130 km north of Vienna and Bratislava.

You can find more information about **MENDELU.**

City of BRNO

- The capital of the South Moravian Region with a population of almost 400 000
- Strategic geographic position within Central Europe with excellent transport accessibility, including an international airport
- Modern, dynamic and fast growing centre of industry, trade, science, information technology, research and innovation with business incubators and centres of excellence in science

- A city of universities with more than 86 000 students at 14 universities and 3 university campuses
- Important centre for international trade fairs and exhibitions
- Good business environment – major global companies and property developers
- Supporting infrastructure for business in the field of science, research and innovation
- High quality of life – a cultural, sports and historical hotspot (Villa Tugendhat, a UNESCO site, functionalist architecture, shopping centres and leisure services)
- Beautiful surrounding landscape

Brno, situated between the Bohemian-Moravian forested highlands and the fertile South Moravian lowlands with vineyards, offers its residents and visitors a high-quality and attractive landscape for living, business and recreation.

The city is a unique cultural centre for the whole region. There are permanent theatre ensembles, opera, ballet and musical stages, a philharmonic orchestra, and you can also visit a number of museums, galleries and libraries, a recently modernized observatory and planetarium, a zoo and botanical gardens. More than 20 festivals of culture and theatre take place in the city each year.

PRELIMINARY SCIENTIFIC PROGRAMME

Monday (7 September)

16^{00} – 19^{00} Registration of participants (Faculty of AgriSciences, Zemědělská 1, 613 00 Brno)

Tuesday (8 September)

8^{00} – 9^{00} Registration of participants (Faculty of AgriSciences, Zemědělská 1, 613 00 Brno)
9^{00} – 10^{00} Official commencement of the conference
10^{00} – 13^{00} Session 1
11^{00} – 13^{00} Lunch
13^{00} – 17^{00} Session 2

18^{00} – 20^{00} **Botanical garden and arboretum**

Wednesday (9 September)

9^{00} – 13^{00} Session 1
13^{00} – 14^{00} Lunch
14^{00} – 17^{00} Session 2

19^{00} – 23^{00} GALA DINNER

Thursday (10 September)

Field trip and excursion

FIELD TRIP AND EXCURSION

Field experimental station in Žabčice (presentation of long-term trials, demonstration of soil conservation tillage with cover crops)

Agricultural farm Rostěnice, a.s. (presentation of precision farming in praxis)

At the present time, the holding company of Rostěnice a.s. manages 10 000 ha, in cadastres of 24 municipalities, in the fertile area of South Moravia, northeast of Brno. Crop production is focused on growing cereals (winter wheat and spring malting barley), winter oilseed rape and maize. From the legumes, soybean is grown here.
Animal production yields 1 000 tonnes of pork and 2 000 of poultry meat annually. Aside from crop and animal production, the holding also operates two biogas plants with an output of 2 200 kW of electricity per hour. Waste heat is used for drying grain and heating the farm buildings and residential units in the centre. The input material for production is silage maize, pig slurry and poultry bedding. Aside from these activities, the company also has a small bakery.
The company uses soil conservation tillage technology by using catch crops and precision farming technologies.

Excursion in the Battlefield of Austerlitz

ORGANIZING COMMITTEE

Vladimír Smutný (CZ)
Barbora Badalíková (CZ)
Vojtěch Lukas (CZ)
Lenka Porčová (CZ)
Lubomír Neudert (CZ)
Tamara Dryšlová (CZ)
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Martin Houšť (CZ)
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Anna Žigová (CZ)
Pavlína Smutná (CZ)
Mikuláš Madaras (CZ)
Danijel Jug (CRO)
Irena Jug (CRO)
Márta Birkás (HU)
Blair McKenzie (UK)

SCIENTIFIC BOARD

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Barbora Badalíková (CZ)
Vojtěch Lukas (CZ)
Lubomír Neudert (CZ)
Tamara Dryšlová (CZ)
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