



**ISTRO CZ**  
Czech branch of ISTRO



**CROSTRO**  
Croatian branch of ISTRO



**HUISTRO**  
Hungarian branch of ISTRO

under the auspice of



and in cooperation with



## ORGANISE

2<sup>nd</sup> Central European ISTRO Conference (CESTRO)

and

8<sup>th</sup> International Conference of the Czech ISTRO branch

**Trends and challenges in soil-crop management**

**September, 6 – 8, 2022, Brno, Czech Republic**

## INVITATION

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

Mendel University in Brno, Faculty of AgriSciences (CZ)

University of J. J. Strossmayer, Faculty of Agrobiotechnical Sciences Osijek (CRO)

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 Organisation (SRB)

We are pleased to invite you to the International Scientific Conference that will take place in Brno, Czech Republic, September, 6 – 8, 2022.

For the second time since the association establishment of our national branches, the Czech Republic, Croatia, and Hungary are going to organise the 2<sup>nd</sup> 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 8<sup>th</sup> 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 agricultural practice, 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 harmonising soil and plant health in agroecosystems and mutual cooperation all over the world.

The conference will take place in Brno, when in 2022 we will commemorate the 200<sup>th</sup> anniversary of the birth of G. J. Mendel. A genius, a personality whose ideas were ahead of his time, and one of the most important scientists in history – this is Gregor Johann Mendel, who entered the history books by discovering the basic principles of heredity. Mendel, the father of modern genetics, is one of the most well-known figures to have lived and worked in Brno.

*CESTRO 2022 Conference is supported by the Ministry of Agriculture of the Czech Republic, Project No. QK 1810186 entitled “Agrotechnical measures for improvement of soil structure stability and rainwater infiltration”.*

*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 retain precipitation for use in periods of drought, filter and buffer potential pollutants leaving our fields, serve as a firm foundation for agricultural activities and provide an environment for the flourishing and diversification of soil microbes that keep the ecosystem running smoothly. Healthy soil is the foundation of profitable, productive and ecological friendly agricultural systems.

European farmers need to adapt to a changing climate, which often means changes in crop management practices and diversification of income sources. Extreme weather and climate events (including droughts and heat waves) can significantly reduce yields of some crops. The projected increase in these events is expected to increase the risk of crop losses, resulting in higher food prices and reduced food security. Opportunities exist to implement a wide range of farm-level measures to improve soil and water management, which can bring adaptation, mitigation and environmental and economic benefits.

## TOPICS/SESSIONS

### 1. Soil health assessment

Soil quality is essential for 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. Fundamental soil properties include physical (texture, structure, available water holding capacity, water infiltration rate, bulk density, soil aggregate stability, effective rooting depth), chemical (pH, cation exchange capacity, intensity and capacity of plant available nutrients, electrical conductance and the concentration of soluble salts), and biological (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 properties in order to define specific interventions that are aimed to enhance the soil quality and fertility. Specific soil management practices are needed to protect and conserve soil resources. There are also specific interventions to increase soil carbon content 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 elements for achieving food and livelihood security. There are various farming system approaches which differ in productivity and environmental impacts. Conservation agriculture, as a promising future direction, has three main practices: minimising soil disturbance, maintaining permanent soil coverage and diversifying crops. Conservation tillage is a suitable approach that leaves the previous year's crop residues on fields and reduces soil erosion and runoff or brings also other benefits such as carbon sequestration. Cover crops play an important role in this system as well.

### 3. Sustainable crop production adopted to climate change

Sustainable intensification of crop production is defined as the integration of biological and ecological processes into crop production, optimising the use of non-renewable inputs and improving farmers' knowledge, and is particularly confronted with the threats posed by climate change. The implementation of climate-resilient crop production systems intersects with a range of interventions already being implemented in the crop production sub-sector towards the goal of healthy agro-ecological systems.

These include:

- Increasing genetic diversity at farm level to improve resilience. Farmers have good potential to adapt crop management practices to changing climatic conditions.
- Integrated pest management (IPM) is an agricultural system that deals with the effective protection against diseases, pests and weeds, which ensures a stable yield and production of quality agricultural products, while at the same time reducing the impact of pesticides on human health and the environment. IPM includes preventive tools (crop rotation, soil tillage and seedbed preparation, nutrient management and fertilisation, choice of suitable varieties), monitoring and forecast of harmful organisms and direct methods (biological, mechanical and chemical) based on the determination of thresholds that could cause economic damage.

### 4. Precision agriculture

Precision agriculture (PA) or precision farming, is a modern farming management concept using digital technology to monitor and optimise agricultural production processes. The crop management practices in PA are adapted to the spatial variability of soil and crop requirements in the form of variable rate seeding, application of fertilizers, pesticides and soil tillage. PA methods promise to increase the quantity and quality of agricultural production while using fewer inputs (water, energy, fertilisers, pesticides, etc.). The aim is to save costs, reduce environmental impact and produce better food quality.

## CONFERENCE VENUE

The conference will be held in [AVANTI](#) hotel which is located on Střední 61, Brno, 602 00, Czech Republic. This hotel is close to the centre of Brno, near Lužánky park. GPS: 49°12'46.17"N, 16°36'16.64"E.

It is not so far from the campus of Mendel University in Brno (MENDELU), Zemědělská 1665/1, 613 00 Brno, Czech Republic (GPS: 49.2102089N, 16.6158772E).

## How to get AVANTI hotel?

### By CAR

- from Prague

Leave motorway D1 at exit 190, Brno-západ, in the direction of Svitavy. After leaving the motorway, go through the first (Pisárky) tunnel and continue along the main road. Go through the second (Královo pole) tunnel then turn right towards the centre. Turn right at the second set of traffic lights and you'll see the hotel.

Journey time from the motorway to the hotel is c. 10 minutes.

- from Olomouc and Bratislava

Leave motorway D1 at exit 190, Brno-západ, in the direction of Svitavy. After leaving the motorway, go through the first (Pisárky) tunnel and continue along the main road. Go through the second (Královo pole) tunnel then turn right towards the centre. Turn right at the second set of traffic lights and you'll see the hotel.

Journey time from the motorway to the hotel is c. 10 minutes.

- from Brno city centre

Follow the signs for Svitavy. Drive the length of Lužánky park and carry straight on through the crossroads. Turn left at the traffic lights at the next crossroads (by the ice-hockey stadium) and you'll see the hotel.

### By TRAIN or BUS – from the main train station with PUBLIC TRANSPORT

Take tram no. 1 (destination Řečkovice) to Hrnčířská stop. Carry on in the direction of the journey and turn right at the crossroads (right next to the tram stop). Walk along Rybníček street, turn left and the second crossroads and you'll see the hotel.

## PRELIMINARY SCIENTIFIC PROGRAMME

### DAY 1: Tuesday (September, 6)

8:00 – 9:30 Registration of participants  
9:30 – 10:00 Official opening ceremony  
10:00 – 11:20 Keynote lectures  
11:20 – 11:40 Discussion  
11:40 – 12:00 Coffee break  
12:00 – 12:50 Session 1  
12:50 – 13:10 Discussion  
13:10 – 14:10 Lunch  
14:10 – 15:00 Session 2  
15:00 – 15:20 Discussion

15:20 – 16:30 Poster presentations  
18:00 – 21:00 Mendel university campus, arboretum, welcome party

## **DAY 2: Wednesday (September, 7)**

9:00 – 10:10 Keynote lectures  
10:20 – 10:40 Discussion  
10:40 – 11:50 Poster presentation  
11:50 – 12:30 Session 2  
12:30 – 12:50 Discussion  
12:50 – 13:50 Lunch  
13:50 – 14:50 Session 3  
14:50 – 15:10 Discussion  
15:10 – 15:30 Coffee break  
15:30 – 16:00 Session 4  
16:00 – 16:10 Discussion  
16:10 – 17:30 Poster presentation  
19:30 – 23:59 GALA DINNER

## **FIELD TRIP AND EXCURSION – PRELIMINARY PROPOSAL**

### **DAY 3: Thursday (September, 8)**

#### **Conservation soil tillage workshop / Excursion**

8:00 Departure from AVANTI hotel  
9:30 – 11:30 Machines for various soil tillage (Field demonstrations, P & L, Ltd.; Hrubčice)  
11:30 – 12:30 Lunch in P & L company, Hrubčice)  
13:30 – 14:30 Contour farming - introduction and practical presentation (Rostěnice farm)  
15:00 – 17:30 Visit of selected place with natural or historical attractions (Brno and surroundings)  
17:00 – 20:00 Farewell party (restaurant in Brno and surroundings)

## **PRACTICAL INFORMATION**

The official language of the conference is English (without translation).  
At the moment we have registered about 70 participants from 17 countries.  
The conference scientific programme will include oral and poster presentations on four conference themes.

**Oral presentations** will be prepared in powerpoint, time limit will be 10 min. (standard presentation in sessions). Scientific board will select keynote lectures with limit of 20 min. for presentation.

**Poster presentations** – poster boards will be A0 format (841x1189 mm) in portrait orientation. Posters will be displayed during the conference days, and will be introduced to the audience during active poster sessions in max. 5-min. presentations.

The best oral presentations and posters presented by young scientists (especially students in different bachelor, master and PhD programmes) will be awarded by the Scientific Board.

## REGISTRATION

**Registration is already closed.**

## REGISTRATION FEE (in Euro)

Conference participant			Accompanying person
ISTRO member	NON ISTRO member	Student	
300	350	150	150

The registration fee includes the following services: participation in the scientific programme (e-book of abstracts), the scientific excursion and field trip, lunches and drinks during conference breaks and the gala dinner.

Accompanying persons, like the conference participants, are also warmly welcomed. We will prepare for them a pleasant stay with a rich social programme that will allow them to enjoy Brno and get to know the culture and history of the South Moravian region.

**Registration payment deadline was 15 July 2022.**

**If you did not pay yet, please do it as soon as possible!!!**

After on-line registration, payment only by bank transfer. All bank charges should be paid by the registrant. Confirmation of invoice payment will be hand over during registration at the beginning of conference or will be sent by e-mail upon request of participant.

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

Account number: 2033987031/2700

IBAN: CZ40 2700 0000 0020 3398 7031

SWIFT: BACXCZPP

Comment: indicate CESTRO\_2022\_YOUR PARTICIPANT NAME! (*means family name*)

## ACCOMMODATION

Accommodation will be available directly in hotel [AVANTI](#).

Deadline for booking (with guarantee of the special prices below) and payment was 15 July 2022.

There are special prices during our conference. When you are ordering a room, please indicate password "CESTRO"+ your familyname.

1-bed room: 1 550,- CZK

2-bed room: 1 800,- CZK

3-bed room: 2 000,- CZK

Prices are per room and night, included breakfast (buffet) and parking place.

**If you did not book a room yet, please do it as soon as possible.**

## IMPORTANT DATES

31 October 2022 – submission of full paper (for Poljoprivreda / Agriculture journal)

## ABSTRACT SUBMISSION

All abstracts which were reviewed and accepted by the Scientific board will be published in the Conference Book of Abstracts in electronic form.

## OPPORTUNITY FOR PUBLISHING A SCIENTIFIC PAPER IN JOURNAL POLJOPRIVREDA/ AGRICULTURE

Authors of abstracts (conference participants with oral or poster presentations) who decide to publish their full papers in JOURNAL POLJOPRIVREDA / AGRICULTURE should prepare a manuscript according to Guidelines for authors. The prepared manuscript should be submitted in electronic form via the paper submission system on the Journal website. Every submitted manuscript is obligated to include the "CESTRO-2022" annotation. Authors will be informed about the manuscript evaluation process. **Final deadline for submitting of manuscript is 31. 10. 2022.** We expect publishing of papers in two numbers of POLJOPRIVREDA journal (12/2022 and 6/2023).

If you want to have an article published this year, please send the manuscript as soon as possible.

## ABOUT POLJOPRIVREDA

Poljoprivreda (ISSN 1330-7142) is a journal covering the technologies/fields/categories related to Agronomy and Crop Science (**Q3**). It is published by Faculty of Agriculture in Osijek. According to SCImago Journal Rank (SJR), this journal is ranked 0.268.

The journal Poljoprivreda / Agriculture publishes original research from the following fields: plant production, animal science, soil science, ecology and agricultural economics. Book surveys or their reviews, summaries of doctoral theses and short communications covering agriculture field may be included in the journal supplement. The papers are printed in Croatian and English language. Full texts of articles are open access free of charge without delay (no embargo period) for educational or personal use respecting authors and publishers copyrights.

## About BRNO

Brno is a city in the South Moravian Region, approximately 200 km southeast of Prague, 130 km north of Vienna and Bratislava.

## Town 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 modernised observatory and planetarium, a zoo and botanical gardens.

#### **About Mendel University in Brno (MENDELU)**

Mendel University in Brno (abbreviated to MENDELU) is a public institution with a long tradition of excellence in teaching and research that has driven new ways of thinking since 1919 and proudly bears the name of J. G. Mendel, the founder of modern genetics. There are over 8,300 students at the university, including 5,500 undergraduates and 2,800 postgraduates. Nearly 1,600 international students make up almost 20 % of the total student body. Mendel University offers more than 100 different graduate degree programmes in Czech and in English languages. The University comprises one University Institute and five faculties: AgriSciences, Business and Economics, Forestry and Wood Technology, Regional Development and International Studies and Horticulture. The modern university campus is based in Brno, the second largest city in the Czech Republic - the heart of Europe.

**MORE INFORMATION** at [www.mendelu.cz](http://www.mendelu.cz)

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