

## 1<sup>st</sup> ISTRO Working Group – Conservation Soil Tillage Workshop

[8<sup>th</sup>-9<sup>th</sup> September, 2020, Osijek, Croatia]

### WORKSHOP REPORT / SUMMARY

1<sup>st</sup> ISTRO Working Group – Conservation Soil Tillage (WG-CST) Workshop was held from 8<sup>th</sup>-9<sup>th</sup> September, 2020, Osijek, Croatia. Host institutions was CROSTRO (Croatian branch of ISTRO), Faculty of Agrobiotechnical Sciences Osijek (as host institution) and OLMIX group.

At first, I wish to thank to all WG-CST members who were able to participate on meeting, especially due to corona issue and real possibilities for COVID-19. In spite of that reason, as general overview and in my personal opinion, meeting was very successful.

As small contribution and as results from that meeting, on official ISTRO web site you may find Book of Abstracts, plus with some other, I hope, interesting and useful information.

Since the WG-CST has main intention to discuss and gathering basic knowledge about current situation in science and professional work in ISTRO main interest areas (e.g. Soil and Water Management, Climate Change, Plant Nutrition, Tillage tools and Implements, Crop Protection, etc.) but sound in domain of conservation soil tillage, 1<sup>st</sup> Workshop was organized as two days meeting.

First day of the 1<sup>st</sup> ISTRO WG-CST Workshop was organized as round table with oral presentations and discussions by topics as already noted in first Invitation flyer:

Workshop Topics:

- CST worldwide experiences
- Different aspects and acceptance of CST
- Research results
- Recognition and perspectives views of CST
- CST and Climate Change relation

Second day was organized as field trip with visiting to:

- multiyear stationary experimental field / demonstration site with conservation soil tillage,
- different experimental sites with opened soil profile and experts support,
- Family farm "PG Knežević" (Host of experiment location and field demonstration site),
- Nature Park "Papuk" and geological park with very rare Basalt columns on soil surface

Participants was very interested in exchanging ideas and collaborating, particularly in two topics: research results and question related to climate change. During the second day, five soil profiles under different tillage practice and different crop rotations were evaluated. With application visual evaluation methods, experts were focused on specific problems appears in application different soil tillage practices, from conventional with plowing to different conservation including no-till. Evaluated specific problems are primarily focused on soil structural problems, soil dynamics under the effect of climate and biological activity, and possibilities and strategies for soil compaction prevention.

**After two-day Workshop meeting, as the main conclusions can be listed:**

- Visual evaluation is a very good and useful tool for evaluation of soil/crop conditions and for prevention of many human and/or climate induced threats,
- Conservation Soil Tillage play one of the main roles in sustainable approach to crop production, but on global scale still not recognized in proportions which is deserved as technique for adaptation and mitigation of climate change and soil degradation,
- Different definitions of Conservation Soil Tillage are pretty common on global scale which sometimes leads to misunderstandings in evaluation of achieved scientific and practical results,
- Proportion of knowledge and practical experience is very heterogeneous on every level (scientists to farmers) and depends on global, regional and even on local scale,
- Main barriers for expanding adoption of Conservation Soil Tillage can be divided on two different group: Economic and social development (knowledge, tradition, technics, technology, science implementation etc.) and Agro-ecological conditions (climate, soil, water, crop, biology etc.),
- Main reason/motivation to adoption Conservation Soil Tillage in crop production are positive financial effect, but unfortunately, the other positive effects as (reduction of soil erosion, increase biogenity and quality of soil, less traffic and soil compaction alleviation, nutritional status and quality traits of crops, weed infestation etc.), are still in the background,
- The participants were very interested in discussing a certain topic and expressed interest in different ways of cooperation,
- Participants agreed on a joint writing edition – Glossary of Conservation Soil Tillage. This proposition needs to be discussed with ISTRO board in details on the next meeting or most likely on main ISTRO conference in Dublin,
- Work in WG is very good "channel" for additional promotion of ISTRO activities and has potential for attracting new members,

**Next WG-CST meeting**

Participants agreed with suggestion about schedule for next WG-CST Workshops in following years, in dynamics once per year. According aforementioned, next meeting is planning for and of June next year (in 2021 - prior to main ISTRO Conference in Dublin) if particular circumstances will allow (exact dates and location will be setup on time) and then 3 months later in September on ISTRO Conference (when will be present most of WG-CST members). So, please put these informal dates in your diaries if you are interested in participation.

From establishing up to present day, WG-CST counts 31 members from 14 different countries. Any ISTRO member, or potential member, is kindly invited and welcome to join WG-CST (there is no any cost) and can do so simply by contacting the Chair ([djug@fazos.hr](mailto:djug@fazos.hr); [daniel@hdpot.hr](mailto:daniel@hdpot.hr)) or Secretary ([daniel.plaza@pvcf.udl.cat](mailto:daniel.plaza@pvcf.udl.cat)) of WG-CST.

WG-CST Chair

Danijel Jug

