



# **ISTRO INFO**

**A Publication of the  
International Soil Tillage Research Organization**

September 2009

Dr. Blair M. McKenzie  
Assistant Secretary General, ISTRO  
Scottish Crop Research Institute  
Invergowrie, Dundee,  
DD2 5DA, UK

## Table of Contents

<b>ISTRO INFO – September 2009 .....</b>	<b>3</b>
<b>18<sup>th</sup> Triennial Conference – some observations .....</b>	<b>4</b>
<b>Working Group F Report – Visual Soil Examination and Evaluation ....</b>	<b>5</b>
<b>Working Group K Report – Controlled Traffic Farming.....</b>	<b>6</b>
<b>Bulgarian ISTRO Branch Conference – Soil Tillage and Ecology .....</b>	<b>7</b>
<b>Estonia Branch Conference 8-10 June 2010 .....</b>	<b>10</b>
<b>Croatia Branch Conference 9-11 September 2010.....</b>	<b>10</b>
<b>Advance notice 19<sup>th</sup> ISTRO conference September 2012.....</b>	<b>11</b>
<b>Other conferences that may be of interest to ISTRO members.....</b>	<b>11</b>
<b>Final Comments .....</b>	<b>11</b>

## **ISTRO INFO – September 2009**

I quickly realized when preparing this, my first issue of ISTRO INFO, that I needed to acknowledge the record of Doug Karlen. Over the last 6 years Doug consistently put out ISTRO INFO packed with ISTRO news, on-time every quarter. So the standard is well and truly set. Thank you Doug!

The next thing to do was to think about what I wanted to achieve. I think the answer is clear; to be a channel for communication between you – the ISTRO members. To quote Doug from the last issue “the quality of a newsletter is only as good as the information that is provided”. So, in addition to conference announcements, working group reports etc I welcome any correspondence, news, thoughts, anecdotes, ideas etc that anyone would like to send me. In addition to welcoming contributions, I will be soliciting information and stories from many of you. Over the next few issues I will be making sure that the new board members have a chance to reveal their secrets, that newer members let us know who they are, and that members living, working or studying in remote locations, share their experiences.

I have also been thinking about what I want to achieve or see happen as Assistant Secretary General (in addition to delivering an informative newsletter). ISTRO provides financial support for the activities of the branches (see later in this issue for information on recent and upcoming meetings) and also supports the 3 currently active working groups. While it will not always be possible to synchronize these different strands; it does seem that there may be an opportunity to have combined activities; e.g. between a branch and a working group. So, my challenge to members active in the various branches and working groups is: as you plan your activities for the next few years consider the scope for synergy, by combining your activity, meeting, field day etc with an additional sub-set of ISTRO members.

Most of you will receive this newsletter by email. Working through the list of email addresses to establish the mailing list database I have been heartened to realize that we do have an extensive membership, with representation from most parts of our world. But there has also been some surprise at the number of people I, perhaps naively, assumed were ISTRO members, or expected because of the nature of their

work to be ISTRO members, and who are not. So my second challenge to all of us is to consider encouraging others to join. Ideas to expand our membership are welcome.

One great way in which ISTRO is helping to expand membership is the offer of 3 year free membership of ISTRO (and a free 1 year subscription to Soil & Tillage Research) to recent PhD graduates in soil-tillage related fields. New PhD's should be nominated by one of their supervisors/advisors (who must be an ISTRO member). Details of how to nominate are on the ISTRO website.

The website it is another way members can communicate with, and inform, each other. If you don't already have the website bookmarked as a favorite on you browser please consider adding it ([http://iworx5.webxtra.net/~istroorg/p\\_frame.htm](http://iworx5.webxtra.net/~istroorg/p_frame.htm) )

I look forward to hearing from many of you, your ideas and suggestions and hope that together we can continue building a dynamic organization.

Blair M. McKenzie

Assistant Secretary General

### **18<sup>th</sup> Triennial Conference – some observations**

Those who attended the 18<sup>th</sup> Triennial conference will be aware of its success. Heartfelt congratulations to Engin and his team for creating a wonderful social environment in which the membership could present and discuss their ideas, science and engineering. What may be less well known is the website (<https://www.istro2009.org> ) is still active. It has more than 2000 photographs covering all aspects of the conference. The comments from those attending the conference (also posted on the website) should be incentive by themselves to attend the 19<sup>th</sup> conference in Uruguay. More on the 19<sup>th</sup> conference will follow.

Alan Franzluebbers sent the following contribution I STRObiled in Turkey...

During the field trip on Wednesday 17 June, some of our ISTRO members were acting a bit strobilaceous. Just as the pine cone has overlapping scales to form a fruitlike structure of unique ability to produce seeds (delicious tasting and source of reproduction), many of our members took the opportunity during the field trip to harmonize their overlapping interests and develop personal friendships in a strobilaceous manner on the farm tour at Ege University in Turkey. Pictured at right is Pieter Groenevelt, who found the quest for the Turkish strobile a joy. "I STRObile, so that you can strobile!"



Editor's note: The notes for the field trip to the university farm included a list of locally produced crops. On the list was strobile. When our accompanying guides were asked "what is strobile" a frantic search for the botanical name ensued. What became clear on arrival at the farm is that strobile is the local name for what in culinary terms in English are called pine nuts.

## **Working Group F Report – Visual Soil Examination and Evaluation**

A small group of enthusiasts from working groups F assembled on Tuesday 16 June during the Izmir conference. Bruce Ball has agreed to be the new Chairman of working group F, with Lars Munkholm acting as secretary of the working group until 2012.

Lars Munkholm and Lothar Müller informed that the group has been active with a meeting in Edinburgh in January 2009, where Bruce Ball hosted about 15 people. A new "Peerlkamp" related method concept for visual evaluation of subsoil was discussed at the meeting, and a trip was conducted to try the ideas in the field.

Everybody supported the idea of a follow-up workshop/field meeting building on the success of the 2005 meeting in France. The following topics were suggested in relation to a new workshop: Methods to assess subsoil compaction; comparison of methods; visual soil structure assessment in relation to important soil functions such as greenhouse gas emissions (in particular N<sub>2</sub>O). A special issue of Soil and Tillage Research was suggested as an outcome from a new workshop. Denmark was suggested as location for a new meeting. Suggested time: Spring 2010 or more likely spring 2011. Bruce and Lars were given the task to proceed with the planning of a new workshop. (Note: this is likely to be the northern hemisphere spring)

Lars J. Munkholm, Working Group Secretary, September 2009

### **Working Group K Report – Controlled Traffic Farming**

Seventeen people attended the meeting which was held at the 18<sup>th</sup> Triennial conference on Tuesday 16 June 2009. We first had an update about what research people were doing or what was being planned and this included cover crops in a CTF context in Denmark, CTF for maize production in Hungary, CTF for spring barley in Slovakia, random compared with a TwinTrac CTF system in Switzerland, irrigated raised beds in Mexico, vehicle tracking calculations and satellite guidance accuracy in Czech Republic and the effects of different intensities of traffic in the UK.

The chairman encouraged those involved in soil compaction or CTF research to fill in the research spreadsheet that was now available online at:

<http://www.controlledtrafficfarming.com/content/istro.aspx>

The spreadsheet is designed to help people design their experiments, to make their work known to others and to encourage collaboration – sharing of expertise and equipment.

We also discussed the need for research on slugs, which had been a particular pest in the last year or two and on nitrous oxide, which many felt CTF could positively address. Cropping of intermediate wheel tracks was also debated as there was a choice of whether to crop or not to crop. Yields in the wheel tracks are being assessed in the UK and results from 2008 and 2009 will be available shortly.

Standardization of wheel track and implement widths for CTF was the other main topic of debate from which it became apparent that some degree of flexibility was going to be needed. At a later meeting in Denmark, this topic was discussed amongst both vegetable and grain growers and the consensus was that two track width standards would be helpful – variable up to 2.5 m and up to 3.5 m. Implement widths were less problematic, but there was a general incompatibility between grain harvesters and other equipment, which it would be helpful if manufacturers could address. In the case of grain harvesters it would also be helpful if the unloading augers could be used on both sides of the machines.

The next meeting of the working group was tentatively scheduled for April 2010 at Tänikon, near Zurich in Switzerland, by kind invitation of Thomas Anken.

Tim Chamen, Working Group Chair, September 2009

### **Bulgarian ISTRO Branch Conference – Soil Tillage and Ecology**

From the 1<sup>st</sup> to 5<sup>th</sup> September 2009 in Albena, Bulgaria, Bulgarian ISTRO Branch, *N. Poushkarov* Soil Science Institute, Sofia and “*Angel Kanchev*” Rousse University organized the International Conference “Soil Tillage and Ecology”. The main topics were: Soil tillage and ecology, Climate change and energy crops, Agriculture and ecological problems. Nearly 80 delegates and representatives of the Bulgarian Agricultural Academy, Rousse University, Agrarian University, Plovdiv, Trakya University participated. Jean Roger-Estrade, who has board responsibility for ISTRO branches, contributed. Prof Totka Mitova, Bulgarian ISTRO Branch president, presented the goals and activities of ISTRO.



The conference proceedings, published with financial support from ISTRO, included 72 scientific papers. These included main results involving ecological perspectives, from long-term experiments from different soils and regions across Bulgaria. The plenary papers concentrated on the main problems of the Bulgarian agriculture: ecological aspects of the current soil tillage systems; assessment of the contemporary hydro-thermal conditions for crop growing in Bulgaria; impact of the climate change on summer crop production; agricultural practices for soil erosion prevention in Bulgaria. Several papers were prepared by international teams and presented the results from joint projects financed by different European programs or bilateral agreements for scientific cooperation.

Discussion in the session on “Soil tillage and ecology” considered tillage as a key factor for sustainable agriculture while increasing the crop productivity and protecting the soil resources of Bulgaria and neighboring regions. The relative merits of different tillage operations (e.g. with and without soil inversion and plough or ploughless production) on the main soil physical properties, including soil water retention, erosion processes, weed infestation, plant residue decomposition, and soil pollution were analysed and discussed. During the sessions on the “Climate change and energy crops” participants discussed the impact of changed climate scenarios on soil processes and crop yield. Presented investigations included methods of estimating evapotranspiration; agricultural practices to help mitigate climate change, and parameters of the new

energy crops. The session on “Agriculture and ecological problems” had particular resonance with local participants and considered maintaining biodiversity in the soil, water and air in both conventional and organic cropping systems.

During the scientific excursion conference participants visited a private farm managed for modern production with new machinery and high yielding varieties while employing soil conservation practices developed in collaboration with local scientists. The farm is focused on improving competitiveness targeting high-demand products while stressing its environmental responsibilities.



Conference participants concluded that, with the varied crops, soils and climatic conditions across the country, the application of diversified soil tillage methods was necessary. This would help to ensure high productivity from the soil resource whilst sustaining ecological conditions for improving food quality and quality of life. The challenges facing the agricultural sciences is to define good agricultural practices (soil tillage operations, management of plant residues applied in crop rotations, etc.) in conventional and organic cropping systems to enable mitigation of the climatic change by decreasing the level of greenhouse gas emissions from agriculture, and sequestering organic carbon into the soil.

## **Estonia Branch Conference 8-10 June 2010**

Members and others interested are invited to participate in the Estonian Branch conference “Risks in Agriculture: Environmental and Economic Consequences” for June 8-10, 2010, in Tallinn, Estonia. Details are on the website at (<http://www.eria.ee/index.php?page=273&> ).

The conference is jointly organized by the Estonian Branch of ISTRO and the Estonian Research Institute of Agriculture ([www.eria.ee](http://www.eria.ee)), in collaboration with the Scientific Creative Association “SCA Ecofiller” and non-profit Organization “Estonian Excellence Centre for Rural Development”. Conference session will focus on 5 key themes: Environmental Strategy, Economic Consequences, Crop Production, Weather and Soil Resources and Sustainable Agricultural Management. Papers will be reviewed and a special issue of the journal “Agronomy Research” is planned. A conference tour of field experiments with examples of environmental risks is planned to the Kuusiku region.

Tallinn can be reached by direct flight, bus, train and boats from Helsinki or Stockholm. English will be the official language for the Conference. For more information check the website or contact the Chair of the organizing committee at [edvin.nugis@eria.ee](mailto:edvin.nugis@eria.ee), or the RAEEC conference team at [RAEECinfo@eria.ee](mailto:RAEECinfo@eria.ee)

## **Croatia Branch Conference 9-11 September 2010**

Members and others interested are invited to attend the Croatian Branch conference “Soil Tillage – Open Approach” from 9-11 September 2010 in Osijek. Details are on the website (<http://suncokret.pfos.hr/~hdpot/simpozij.htm> ).

The conference is organized by the Croatia Soil Tillage Research Organization – CROSTRO and the Croatian branch of ISTRO. The conference themes will be:

1. Soil tillage in function of environmental protection
2. Conservation tillage – direct seeding – no-tillage
3. Soil biotic and abiotic degradations – causes and consequences
4. Soil tillage – new approach – technologies – perspectives

The scientific and professional presentations will promote correct application of agrotechnical measures, the newest state-of-the-art information and techniques, and alternative approaches in agricultural production – all in the scope of soil tillage. English will be the official language for the conference. For more information including regards travel and accommodation, see the website contact Dr. Bojan Stipešević – Branch President at: [Bojan.Stipesevic@pfos.hr](mailto:Bojan.Stipesevic@pfos.hr)

### **Advance notice 19<sup>th</sup> ISTRO conference September 2012**

Three years may seem a long time, but this first notice is to alert members to reserve dates in diaries and to start thinking about how to arrange for their participation in Montevideo. The website at ([www.eemac.edu.uy](http://www.eemac.edu.uy)) gives details including information of the pre conference tour through Argentina to Uruguay and the post conference tour from Uruguay into Brazil. By travelling from south to north these tours should offer ranges of crops and environments to provide something of interest for all. Updates of the website are frequently being made – so keep it bookmarked.

### **Other conferences that may be of interest to ISTRO members**

19<sup>th</sup> World Congress of Soil Science in Brisbane Australia, 1-6 August 2010. Papers are due for submission by 31 October 2009. If members know of other forthcoming events that may be of interest please provide me the details.

### **Final Comments**

You are free to circulate ISTRO INFO to any who may be interested. If you routinely pass it on to colleagues or friends, consider encouraging them to join ISTRO. If you have colleagues who are ISTRO members please check whether they have received this issue. Circulation by email is only as good as the database of email addresses. Checking whether colleagues have received this issue will help us identify where email addresses need to be updated. If you are about to change your email address, please let me know, so that we can continue to reach you.

Blair M. McKenzie

Assistant Secretary General