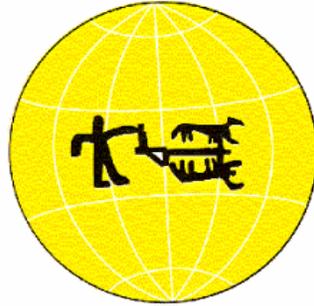


ISTRO INFO



A Publication of the International Soil Tillage Research Organization

The International Soil and Tillage Research Organization (ISTRO) continues to grow and has 200 paid-up members in 2002 that are distributed among 44 countries. One of the strengths of ISTRO is the diversity of interests of members and their geographic location. This diversity also provides us with an incentive to enhance communication among members.

ISTRO INFO is one vehicle for communication, providing news on the Organization and its membership between ISTRO Conferences.

The next issue of ISTRO INFO will be distributed about four months before the next ISTRO conference in Australia. It will include information on resolutions to be presented to the membership at the meeting in Brisbane. Details on the election of officers will also be included (note that only members with membership paid up to 2002 or later will be eligible to vote). If you have information that you would like distributed to the membership in advance of the meeting, please forward it via Email by December 31, 2002 to:

Dr. Bev. Kay, Secretary General, ISTRO, Dept Land Resource Science, University of Guelph, Guelph, ON, Canada, N1G 2W1, E-mail: bkay@lrs.uoguelph.ca.

**Plan to attend the 16th Triennial conference of ISTRO in
Brisbane, Australia July 13-18, 2003**

Fill in the “Expression of Interest” form included on the last page

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1. Welcome to the 16th Conference: Message from the President

The 16th Conference of ISTRO will be held on July 13 – 18, 2003, at the University of Queensland, Brisbane, Australia. Your Australian colleagues are looking forward to hosting what we expect will be an exciting and informative meeting. The Conference will comprise 5 days of sessions, including working groups, tours and displays. In addition we are planning a range of social activities to allow participants to relax, unwind and experience the Australian lifestyle. Preliminary details of the conference are given below; additional details will follow. We look forward to seeing you “down under” in 2003.

Jeff Tullberg, ISTRO President, 2000-2003.

Venue

The Conference will be held at The University of Queensland's St Lucia campus, considered by many to be Australia's most attractive. Located seven kilometres from the city's heart on a magnificent 114-hectare site in a bend of the Brisbane River, the campus has expansive landscaped grounds. Its hub is a semi-circle of cloistered buildings enclosing the National Trust-listed Great Court.

[Brisbane](#) is the capital of the Sunshine State of Queensland. The city lies in the heart of one of the most diverse and popular holiday regions in Australia, and enjoys an enviable sub-tropical climate with clear, dry and mild winters (Mean max. July temperature about 20°C).

Within an hour of Brisbane you can escape to the beautiful beaches of the [Gold](#) or [Sunshine](#) Coasts, or head off into the scenic hinterland regions and enjoy walks through the many National parks. The Great Barrier Reef, 2h flight to the north, is a popular stopover for travelers.

Language

The official Conference language will be English.

Registration

Early conference registration will be less than AUD\$600 (US\$350) for ISTRO and ISTRO Branch members (non-members AUD\$720, students AUD\$250, AUD\$100 extra for late registration). Registration will include the mid-conference field day, but not the conference dinner, or other tours.

Accommodation

Student study-bedroom style accommodation will be offered at a University College within short walking distance of the Conference venue (AUD\$60/night). Hotel accommodation will also be available. Details will be in the Registration Brochure, which will be sent out in January 2003.

Tours

Tours will provide participants with an opportunity to see the diversity of Australian agriculture and associated management practices.

1. PRE-CONFERENCE TOUR, 7-11 July.

Visit the winegrowing areas of the Hunter Valley, while travelling to the extensive dry land and irrigated grain, cotton and vegetable production, including high precision controlled traffic zero till systems.

2. FIELD DAY, 16 July.

An exciting day of equipment demonstration, soil impact assessment, farmer interaction and open discussion.

3. DAY TOUR, 19 July.

Precise CT Farming.

4. POST-CONFERENCE TOUR 20-24 July.

Soil management/sustainability issues of tropical/subtropical agriculture/horticulture, and long-term monoculture of sugarcane, ending at Cairns (Great Barrier Reef).

TOUR COST

Details will be included in the registration brochure. For budgeting purposes, a figure of about AUD\$130/day may be anticipated.

Themes

The Conference program will be organized around nine themes.

1. Soil Dynamics

e.g. Soil/tool interactions, Fragmentation; Soil / tillage modelling; Equipment performance; Energy use

2. Traffic and Tillage

e.g. Traffic and tillage impact; Energy and soil structure; Erosion, soil health and productivity; Case studies

3. Precise Agriculture

e.g. Precision guidance; Effect on zero-till planting, weed control, fertiliser placement; Controlled traffic

4. Tillage in the Global Greenhouse

e.g. Tillage, energy and fossil fuel use; soil carbon sequestration and N₂O emission; Global warming.

5. Soil Quality and Health

e.g. Soil Biology and ecology; Soil/crop response to tillage and traffic; Soil health indicators

6. Zero Tillage and Conservation Agriculture

e.g. Planting, residue management and traffic issues in low-resource and capital-intensive systems

7. Economics and Case Studies

e.g. Tillage system economics; New crop establishment systems; Social impact of system change

8. Structure and Hydrology

e.g. Soil management impact on infiltration; Runoff erosion; Fertiliser and pesticide transport

9. Tillage and the Environment

e.g. Tillage systems and water quality; Organic waste recycling; Soil management under permanent crops

Call for Papers

Please submit your Abstract of not more than 250 words by **25 NOVEMBER 2002**. Abstracts should be submitted as a Microsoft Word file sent as an attachment via email to sally.brown@uq.net.au Please name the file attachment with your SURNAME and first name. AND register your interest in attending the Conference by returning the form provided to:

ISTRO 2003 Conference Secretariat
Sally Brown Conference Connections
 PO Box 108 Kenmore QLD 4069 Australia
 Telephone +61 7 3201 2808
 Fax +61 7 3201 2809
 Mobile 0407 178 200
 Email sally.brown@uq.net.au

Website by Dr Badri Basnet

<http://www.istro.org>

Time Table

25 Nov 2002	Deadline for receipt of Abstracts
Jan 2003	Tentative program finalisation Successful authors notified
30 April 2003	Registration brochure sent out Early-bird discount cut-off
May 2003	Deadline for receipt of full papers Final announcement

Expression of Interest Form:

An expression of Interest form is included on the last page of this issue of ISTRO INFO.

2. Past President's Report

Report on the 15th Conference of ISTRO

The 15th Conference of ISTRO was held July 2-7, 2000, in Fort Worth, Texas, USA. It was a personal honor and a professional pleasure to have been allowed to serve as ISTRO President for the 1997-2000 term of office. The Office has allowed me many opportunities to grow which would not have been available in my normal role as a USDA researcher.

The 1997-2000 Term was a period of time with rapid changes in the mode of professional communication. Your Officers made progress in electronically updating the Membership data base, using modern record-keeping, and by using e-mail to poll Board Members and others for their suggestions on procedural matters without convening an interim Board Meeting. We anticipate that by the end of the next Term in 2003, that all Members will be on-line with e-mail and internet services. This will reduce time and costs of mailings and give all Members access to a resource data base to identify fellow ISTRO Members as potential collaborators. The Constitution and Bylaws Committee has prepared proposed revisions to reflect these new procedures and organization.

ISTRO become more global in the 1997-2000 period. We have two new National Branches in China and Kenya. As your President-Elect and President, I have visited Members and potential ISTRO members in these two countries as well as in Mexico, South Africa, Zimbabwe, Tanzania, Ukraine, Kazakhstan, Korea, Australia, Poland, and Germany. Other Officers, Committee Chairs, and active Members have visited agricultural researchers in many additional countries and regions as part of their professional travels. As a result of these combined efforts, ISTRO is better known globally and is becoming positioned to have a voice in global agricultural research concerns.

I feel that the main goal of ISTRO should be to serve its Membership by providing a structure for professional linkages, collaboration, and publication. We have done some of these things during 1997-2000, but we are leaving many things for the new team of 2000-2003 Officers, Board Members, Committees, and Working groups, as well as the Membership.

It was a pleasure to host the Pre-Conference Tour, the ISTRO-2000 Conference, and the Post-Conference Tour. The Pre-Conference Tour was lead by Dr. Doug Kaplan and toured the central part of the USA from Chicago to Fort Worth. The Post-Conference Tour was lead by Dr. Don Erbach and toured the Southern states from Fort Worth to Atlanta. There were 3½ days of oral technical presentations, two sets of poster presentations, a one-day technical tour to a Texas farming region, Working Group meetings, two Board meetings, and a General Assembly during the ISTRO-2000 Conference. Entertainment for the Delegates and Guests was Texas country music, 4th-of-July Independence Celebration, Mexican music and dance, and a cowboy rodeo.

Salute To Retired Officers And Board Members

Many people have helped maintain and improve ISTRO as it becomes a more global Organization with global agricultural and environmental concerns. We wish to salute the following ISTRO Members for serving the Organization in special ways during the last several years:

Professor Birl Lowery, Retired Secretary-General

Professor Henryk Domzal, Retired Past-President

Professor Vitaly V. Medvedev, Retired Board Member

Professor H. Bing So, Retired Board Member

John E. Morrison, Jr., ISTRO President 1997-2000

3. New ISTRO Branches

ISTRO Branches enable tillage researchers in countries with recovering and developing economies to interact more effectively with one another and to join ISTRO as active members. The formation of new branches of ISTRO in China and in Kenya were approved by the ISTRO Board at its meeting in Fort Worth in 2000. Since that time the Board has also approved the formation of a branch in Turkey. More information on Branches will be included in the next issue of ISTRO INFO.

4. Working Groups

The Working Groups facilitate interaction between members who have common interests and a desire to accomplish a specific task (or tasks) between the regular meetings of ISTRO. Examples of such tasks include sharing research information, identifying research needs, developing collaborative research programs, and organizing special sessions for the ISTRO meetings.

New Working Groups

The Board approved the formation of two new Working Groups at its meeting in Fort Worth in 2000.

Resource conservation planting systems for developing country agriculture:

Contact:

Chair: Dr. Jeff Tullberg, University of Queensland Gatton, Qld., 4345, Australia.

Email: J.Tullberg@mailbox.uq.edu.au

Secretary:

Objectives:

- To accelerate the adoption of resource conservation systems that result in increased food production by cataloguing, and characterizing existing equipment and systems from all parts of the world

- To facilitate the exchange of information to assist in the development and identification of needs of farmers and professionals working in national programs. Priority will be given to manual, animal and low power tractor systems.

Tasks for 2000-2003:

- To complete two surveys of planting equipment and present reports on the surveys at the meeting of the Working Group in Australia in 2003.

Tillage Translocation and Tillage Erosion

Contact:

- Chair: Dr. Michael J. Lindstrom, North Central Soil Conservation Research Laboratory, USDA-ARS, Morris, Minnesota, USA, Email: mlindstrom@morris.ars.usda.gov

- Secretary: Dr. José Rafael Marques da Silva, Departamento de Engenharia Rural, Universidade de Évora, Évora, Portugal, Email: jmsilva@uevora.pt

Objectives:

- To facilitate awareness and understanding of tillage translocation and tillage erosion processes and their agricultural, environmental and socio-economic impacts

- to facilitate collaboration in international research and development initiatives

Tasks for 2000-2003:

Approximately thirty-five researchers attended the third workshop on Tillage Translocation and Tillage Erosion, held in Reading, UK, in March 2002, hosted by Dr. Tim Quine. The title of the workshop was Soil Variability on Agricultural Land – Evolution, Characterisation & Importance. The range in presentations indicated that the emphasis in research by members of the Working Group is progressing from basic measurements of soil translocation and tillage erosion to measurements of the effects of soil translocation on variability of soil properties and long-term soil sustainability. Knowledge of the soil translocation process has been instrumental in identifying the source of soil variability over landscapes that is becoming a major concern for long-term soil sustainability. However, the Working Group still has much to do in spreading our knowledge to other research groups that are not familiar with the process of tillage erosion and its consequences. How do we accomplish this task? This is proving to be a difficult task. Presenting our research results at as many scientific meetings as possible and continued publications of our research in respected journals seems to be the course of action to follow.

Activities of Other Working Groups

The following Working Groups have reported activities since the ISTRO conference in Fort Worth:

Subsoil Compaction

Contact:

Chair: Jan J.H. van den Akker, ALTErrA Green World Research, P.O. Box 47, NL-6700 AA Wageningen, The Netherlands. Email: <mailto:j.j.h.vandenakker@ALTErrA.wag-ur.nl>
 Secretary: Ward B. Voorhees, USDA-ARS-MWA-NCSCRL, 803 Iowa Avenue, Morris, MN 56267, USA. Email: <mailto:voorhees@morris.ars.usda.gov>

Tasks for 2000-2003:

The two European concerted actions on subsoil compaction, which were introduced during the ISTRO-2000 conference (Van den Akker and Canarache, proceedings ISTRO-2000) were finalized in 2001 and 2002. In total 49 institutes from the European Community and the European part of the former Soviet Union were represented in the two concerted actions. The general objective of the concerted actions was to make an inventory of existing knowledge and experiences with the distribution and impact of subsoil compaction in Europe, formulate recommended methods and field experiments, and develop ways and guidelines to prevent subsoil compaction. The two concerted actions collaborated in the construction of two databases: literature on (1) subsoil compaction; and (2) soil mechanical properties and impact of subsoil compaction on soil, nutrients, physical properties, crop production and environment. Results of the concerted actions are published in proceedings, a book, and national and international papers and can be found on the internet site: <http://www.alterra.wageningen-ur.nl/subsoil-compaction/>.

Neither databases are available yet, because there is still some editing needed. However, it is expected that by the end of 2002 or the beginning of 2003 both databases will be available on the internet site. A Special Issue of Soil and Tillage Research on Subsoil Compaction is planned to be published by the end of 2002.

We think that we were successful in getting “subsoil compaction” recognized by the European Union as a serious form of soil degradation. At the end of 2002 the Sixth Framework Programme of the European Community for research, technology development and demonstration activities will be launched, and we expect that research on subsoil compaction fits well in the calls for proposals of FP 6.

During the ISTRO-2003 conference the constructed databases and the other results of the concerted actions will be presented in the meeting of the ISTRO Working Group on 'Subsoil Compaction'. In the working group meeting during ISTRO-2000 it was suggested that one of the tasks of the ISTRO Working Group would be to expand world wide the database on subsoil compaction literature and to make the literature database available on the internet. The first steps have been taken and ways to advance this work will be discussed during the Working Group meeting in 2003.

Visual Soil Examination and Evaluation:

Contact:

- Chair: Dr David McKenzie, PO Box 2171, Orange NSW 2800, AUSTRALIA. Email: d.mckenzie@soilmgt.com.au

- Secretary: Dr Brian Murphy, Department of Land & Water Conservation, PO Box 445, Cowra NSW 2794, AUSTRALIA. Email: bmurphy@dlwc.nsw.gov.au

Tasks for 2000-2003:

The Working Group will be promoting its aims at the ISTRO meeting in 2003. Creation of a website for the Working Group is being considered.

5. News of Members

Voorhees Honoured with ISTRO Life Membership

On June 28, 2001, over one hundred friends and colleagues honoured Ward B. Voorhees upon his retirement after 44 years of employment with the USDA-ARS at the North Central Soil Conservation Research Laboratory, Morris, Minnesota. The highlight on the evening was the reading of a citation by Dr. William E. Larson inducting Ward as a Life Member of ISTRO. Ward has had a long and productive research career concentrating on various aspects of soil compaction. His research in the 1970's and 1980's clearly identified and quantified for the first time, the significant impacts that ordinary farm machinery wheel traffic had on soil compaction, plant productivity, and soil erosion. In 1980, Ward and Dr. Inge Hokansson from Upsalla, Sweden, organized a five year international cooperative field experiment involving over 30 research projects in northern Europe, the United States, and Canada, quantifying the extent and persistence of deep subsoil compaction caused by heavy harvest equipment. Results from this research have had worldwide impact as reflected in changing design of tires and tracks on farm equipment, and the manner in which farmers use this equipment.

Ward served on the Board of Directors of the International Soil Tillage Research Organization (ISTRO) from 1988 to 1994 and as Editor-in-Chief of Soil & Tillage Research from 1985 to 1988. He is currently Secretary of the ISTRO Working Group on subsoil compaction, and Chair of the ISTRO National Branch Development Committee. He received the American Society of Agronomy Crops and Soils Magazine Award for Excellence in Agricultural Journalism in 1978, and was elected Fellow of the Soil Science Society of America in 1986, and Fellow of the American Society of Agronomy in 1989.



Figure 1. Ward Voorhees being honoured on his retirement by William Larsen.

6. Other News

SIDASS - Soil Erosion as a Function of Tillage Practices and Hydraulic Properties – A Database for European Soils

During the last 3 years an international group from Spain, Germany, Romania, Poland and Hungary: (De la Rosa, D.(Sevilla), C. Simota (Bukarest), R. Horn (Kiel) , K. Rajkaj(Budapest) , A. Dexter(Pulawy), E. Czyz (Pulawy), H. Fleige (Kiel), E. Dumitru (Bukarest), R. Enache (Bukarest) , F. Mayol (Sevilla)) were financially supported by the European Union in order to develop an integrated model (SIDASS) to predict soil strength, stress distribution and stress induced changes of ecological properties as well as soil erosion for arable soils under various landuse systems. SIDASS can be used to predict losses due to mechanical and hydraulic processes and it also enables users to simulate prevention strategies if the required basic datasets are available. SIDASS is based on some precise datasets from specific areas, and is able to forecast the effects of soil mechanical processes like soil deformation on soil erosion and it may be also used to couple the effects of hydraulic and mechanical properties on soil erosion processes. Thus in its final stage it provides a tool for recommendations of site-specific land use and management strategies. Due to its indirect methods estimating pedotransfer functions, SIDASS is able to estimate the key soil parameters for soil compaction and erosion for various tillage practices from the soil data available from standard soil survey studies. Therefore, SIDASS model could be applied at regional and continental scale evaluating the effects of agriculture policies

For further information see www.soils.uni-kiel.de

7. Members (paid to 2002) without E-mail address on file

Correspondence by E-mail enables us to reduce mailing costs and increase the ease of communication within ISTRO. The following members have their membership paid up until 2002 but have not listed their E-mail address. Would those of you on this list send an E-mail message to:

bkay@lrs.uoguelph.ca

If you are renewing your membership, make sure you enter your E-mail address. Thanks for your help.

Country	Surname	Title	First Name
AUSTRALIA	Heenan	Mr	Damian
AUSTRALIA	Hulugalle	Dr NR	
AUSTRALIA	McGarry	Dr	D
AUSTRALIA	Thomas	Mr	GA
BELGIUM	Roisin	Mr	C.
BRAZIL	Mielniczuk	Mr	Joao
BRAZIL	Semeato S/A - Ind. e Com		
COLOMBIA	Leiva-Baron	Mr	Fabio R
CROATIA	Basic	Dr	F.
CROATIA	Zugec	Prof Dr	I.
DENMARK	Allesoe	Mr	C
DENMARK	Jensen	Prof	HE
ESTONIA	Nugis	Dr	E
FRANCE	Boizard	Mr	Hubert
FRANCE	Guérif	M.	Jérôme
GERMANY	Flammer	Mr	M
GERMANY	Franken	Prof.	H.
INDIA	Srivastava	Dr	K.P.
ITALY	Rizzo	Dr	V.
JAPAN	Sakai	Prof	J.
NIGERIA	Nnabude	Mr	P.
NORWAY	Ekeberg	Dr	E
NORWAY	Njøs	Prof	A
NORWAY	Riley	Dr	H.
PERU	Pinna	Dr	J
POLAND	Czyz	Dr	A.E.
POLAND	Jedruszczak	Prof.	Maria
POLAND	Kus	Prof.	Jan
SOUTH AFRICA	Agenbag	Mr	GA
SWEDEN	Etana	Dr	Ararso
SWEDEN	Myrbeck	Mr	Asa
SWEDEN	Rydberg	Mr	Tomas
SWITZERLAND	Richner	Mr	Walter

SWITZERLAND	Stamp	Prof Dr	P.
SYRIA	Diekman	Dr	J.
TANZANIA	Ley	Dr	GJ
THE NETHERLANDS	Van Baren	Mr	Hans
TURKEY	Icöz	Dr	Erkan
U.S.A.	Alway		Linda J.
U.S.A.	Bradford	Dr	JM
U.S.A.	Erbach	Dr	DC
U.S.A.	Hargrove	Prof	WL
U.S.A.	Karlen	Mr	Doug
U.S.A.	McCain	Mr	D.
U.S.A.	Miller	Dr	FP
U.S.A.	Moldenhauer	Dr	WC
U.S.A.	Odunze	Mr	Azubuike
U.S.A.	Torbert	Dr	HA
U.S.A.	Trouse	Dr	AC
U.S.A.	Wilkins	Mr	DE
UKRAINE	Medvedev	Prof	VW
UNITED KINGDOM	Atkinson	Prof	D.
UNITED KINGDOM	Batey	Dr	T.
UNITED KINGDOM	Hurst	Mr	Michael H.
URUGUAY	Kouyoumdjian	Mr	B K

Expression of Interest

(forward to the Conference Secretariat given on page 5)

Name _____

Organization: _____

Address: _____

Country: _____ Post Code: _____

Telephone: _____ Fax: _____

I am interested in the conference dinner (AUD\$50)

I am interested in the partners program

I am interested in tours:

1

2

3

4

ISTRO Membership Status

My ISTRO 2002 membership has been paid*

or

I am a member of the -----Branch*

I will join ISTRO by paying my 3-year ISTRO membership (AUD\$110) with my conference registration

I will pay the non-member registration

*(As recorded by the ISTRO Treasurer)

Proposed Presentation

Tentative Title(s): _____

Preferred Theme Number: _____

Preferred Presentation Format (Oral, Poster, Workshop): _____