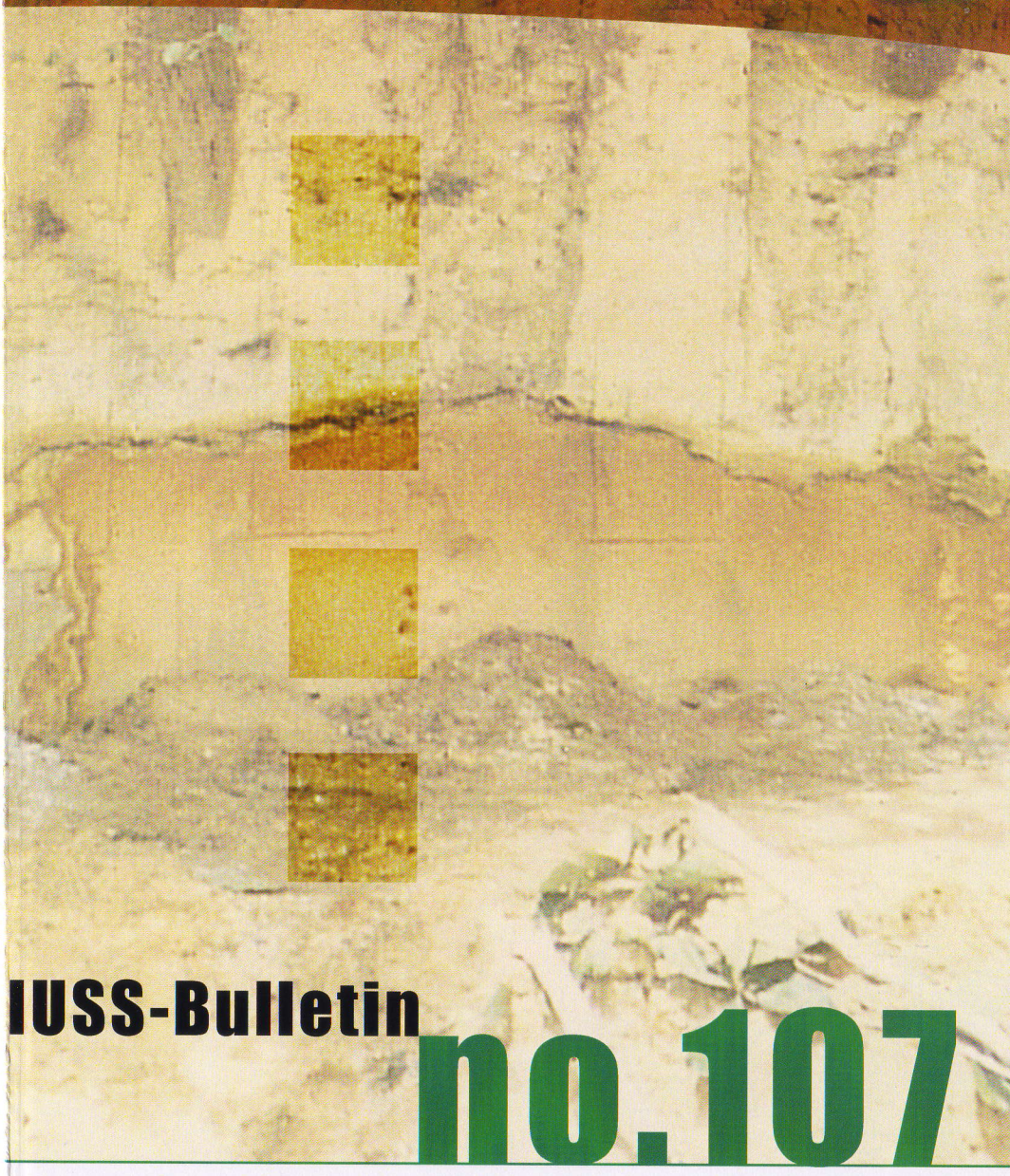
International Union of Soil Sciences



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International Union of Soil Sciences

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Contents

List of Cooperating Journals and addresses of IUSS officers appear once per year in the IUSS Bulletin – both can be found at www.iuss.org

News from the Secretary General

In the Northern Hemisphere the summer is coming to a close and in a few months we shall be experiencing those short winter days so typical of the high latitudes, at present we are enjoying the pleasant late summer sunshine. During these summer months I have found myself spending a great deal of time bringing together the Election Slate for Division and Commission Officers. For the first time the Officers will be elected by a ballot of the global membership rather than by the relatively small proportion of the membership present at the World Congress and willing to vote. In moving this way it was our intention to seek to make the operations of IUSS more inclusive, and, dare I say it, more democratic. As I have heard on our news media on a number of occasions in recent months, "Democracy is difficult", and so it is proving! Although there have been regular announcements in the Bulletin and elsewhere, and the Division Chairs and their Electoral Committees worked with considerable effort to produce a well balanced list of candidates, we received some suggestions that the membership had not been fully informed about the nomination process. Reluctantly we delayed the election programme and through the Bulletin and 'IUSS Alerts' drew the attention of the Membership to the forthcoming elections. These actions have generated some responses which following discussions with the Divisions we have sought to incorporate. I was planning to distribute the ballot forms and other details by the first week of September, but because of the delays encountered by seeking to ensure that the nominations process was as inclusive as possible there may be slippage of three or four weeks in the timetable. It is important for the Membership to be aware however that the actual election process is managed by National Societies not by IUSS. IUSS will distribute details of the candidates and a proforma ballot, but it is the duty of the National Members (Societies) to organise the ballot amongst their members and return the results to me, the Secretary General, for compilation of the final results. Ballots should be taking place in the next three months with returns to me by 1st February 2006 and results announced by the end of February 2006. Since the August 'IUSS Alert' my inbox has been full to overflowing with enthusiastic supporters of some candidates expressing their support for them. There was evidence of a co-ordinated campaign in support of one candidate because the letters expressing support had the same content and format with the exception of the name of the person expressing support. I welcome your interest, but this was not necessary!

The World Congress in Philadelphia 9-15 July 2006 moves ever closer. You will have seen through IUSS Alerts and elsewhere that the deadline for submission of abstracts has been extended to 1 December 2005. The Organising Committee are working feverishly to ensure that this will be an excellent Congress both scientifically and socially. You may have noticed that we are very fortunate to have Jeffrey Sachs as our keynote speaker at the Opening Ceremony. Jeffrey Sachs is the author of a best selling book 'The end of Poverty: the economic possibilities of our time'. I note from reviews of this book that 'Jeffrey Sachs is that rare phenomenon: an academic economist famous for his theories about why some countries are poor and others rich, and also famous for his successful practical work in helping poor countries become richer. In this long awaited, fascinating, clearly and movingly written book, he distils his experience to propose answers to the hard choices now facing the world.' Whilst travelling in my car, or in fact not travelling, as I spent two hours at a standstill on one of our main highways following a major traffic accident a few miles ahead, the tedium and frustration of the delay was somewhat relieved by turning on the car radio to find Jeffrey Sachs being interviewed for almost an hour. Whilst I was impressed by the above mentioned book and the attendant reviews, I realised after listening to this interview that IUSS is exceptionally fortunate to have such an excellent speaker who has a broad view of the global problems. His analysis of global and regional issues (the interview was just days after Hurricane Katrina devastated parts of the southern United States of America and part of the interview was a very incisive analysis of the response to Katrina) is very refreshing, and he seems able to present the economic context of these issues in a manner in which a non-economist is able to clearly understand the issues. I would recommend that you all attend the Opening Ceremony in Philadelphia, I am convinced that with Jeffrey Sachs as our keynote speaker it will be something special!

As reported elsewhere in the Bulletin, IUSS is active together with other GeoScience Unions (including IUGS, IGU and IUGG) in promoting activity towards a 'Year of Planet Earth' planned for 2007-2009, but in addition to the specific focus of the Year the group of GeoScience Unions are also seeking closer collaboration in promoting a earth science programme across a broad range of themes. A series of Brochures have been produced as part of this initiative across a broad range of earth science topics. Recently number 10 in this series of brochures has been published, entitled 'Soil – earth's living skin' and this is downloadable from the IUSS website. The other brochures in the series are available from www.yearofplanetearth.org or This collaboration we hope will assist in setting research agendas and will also seek to ensure a greater awareness of the importance of the earth's surface to many of our activities and emphasise the need to manage it sustainably. Details are available at www.yearofplanetearth.org IUSS has seen this as an important area and has contributed to the developments to date and will continue to contribute both in financial inputs and contributions from IUSS's global membership.

In October I shall be attending as the representative of IUSS the 28th General Assembly of ICSU in Shanghai. ICSU or the World Council of Science brings together representatives from the National Academies and the Scientific Unions to discuss and formulate global policies on scientific matters. To give readers a flavour of the coverage, the forthcoming agenda includes reports and debates on topics such as: Environment and its Relation to Sustainable Development, Natural and Human Induced Hazards, Science for Sustainable Development, Science and Society: Rights and Responsibilities, Capacity Building and Access to Scientific Data. Whilst there is a great deal of sitting through long debates, perhaps more importantly these meetings also give the opportunity for representatives from the Scientific Unions to meet and discuss how to work together to promote our science. The Year of the Planet Earth mentioned above arose in part from discussions undertaken at ICSU meetings and there are ongoing discussions of possible global initiatives in the broad biological area.

The IUSS Bureau (President, Vice-President, Secretary General and Deputy Secretary General) met in Newark, Delaware in June. Our discussions inevitably were wide ranging and arising from these we have proposed two new initiatives. The first is to organise at the World Congress in Philadelphia two open discussions on 'Soils and Education' and 'The Soil Science research environment'.

Within the first of these we have suggested a Symposium entitled 'Soil Education – The directions for the future? What is the role of IUSS?' The Bureau have asked Alfred Hartemink (DSG) and Alex McBratney (University of Sydney) to take this initiative forward, liaising with other members to plan this symposium, drawing on a small number of other individuals to assist them. The Bureau's aim is to organise a Symposium with a single speaker to set the scene and then follow up with an Open Forum discussion. We considered that some of the questions to be answered might include:-

a. How do we attract students in to Soil Science? Is Soil Science relevant to the young people of the early 21st Century?
b. How do we develop students with the right sort of skills to meet the demands of a wider community of end users? (Do we know what are the skills required by these end users?)
c. Where should we seek to sow the seed of 'the importance of Soil Science?'
    1. Generating the demand for Soil Science
    2. Generating the demand from the students for Soil Science education

The second symposium we anticipate to be in support of ongoing initiatives by NSF in the US and DG Research in Europe and other national and supranational research bodies. We are suggesting a second cross-cutting symposium which should focus on aspects of soil science research, possibly with the title 'Soil Science Research in and Inter-disciplinary Context'. The aim of the symposium should be to consider some of the following:-

a. The increasing interdisciplinary nature of research
b. The nature and role of funding (often less for blue sky, ground-breaking research more for cross-discipline and inter-discipline initiatives – possibly because the

persons asking for research based answers do not view in the same disciplinary context as we scientists).

c. The role of IUSS in promoting research ensuring that soil science is included in the inter-disciplinary research programmes.

The President would seek to co-ordinate this initiative with colleagues from the NSF group.

In addition to the initiatives for symposia at the WCSS, the Bureau consider the need for an initiative to improve our outreach to the educated public and decision makers. In this context the Bureau suggest that IUSS should endeavour to produce (with contributions from the membership) a small number of single page brochures (in paper and pdf formats) which explain how Soil Science fits in to current problems and debates? The driver for this initiative is that we must seek to break through the barrier of understanding (or is it misunderstanding?) which we often seem to face as Soil Scientists when seeking to show the critical role soil plays in many of our environmental systems. It was the Bureau's view that we must seek to remove the barrier of terminology when communicating about soils and soil science.

The Bureau propose that we should aim to produce, in the first instance, four sheets – based on about 800 words, two graphs, two pictures. These sheets would serve to link key themes, some of which might be chosen from the following:-

- Soils and Climate Change
- Soils and Food Production
- Soils and Human Health
- Soils and Water
- Soils and Poverty Alleviation
- Soils and Land Use Planning

Whilst the initial focus will be on English language version we would aim to produce these (at least in pdf format) in French, Spanish, and other languages. The Secretary General and Deputy Secretary General will act as coordinators on this together with commercial assistance. The first announcement about this went out in the August 'IUSS Alert' and we

are pleased at the tremendous response from a wide range of the membership, many telling me that they were getting involved with IUSS for the first time. Once the details of the Election are sent out to Member Bodies I shall be focusing on moving this forward.
I hope you have registered for the World Congress and will participate in the elections. If you have any queries concerning the elections, please do not hesitate to contact me at iuss@rdg.ac.uk.

Reading, September 2005
Stephen Nortcliff
Secretary General IUSS
E-mail iuss@rdg.ac.uk

18th World Congress of Soil Science

The 18th World Congress of Soil Science is being hosted in the United States on July 9-15, 2006 in Philadelphia, PA. The theme for the Congress is *Frontiers of Soil Science: Technology and the Information Age.* The format for these meetings is a series of oral and poster symposia covering a wide diversity of topics in soil science and related fields. You may find a list of WCSS Symposia available for your submission and instructions for submitting the Abstracts at the web address: www.18wcss.org
Other WCSS program activities including pre-, post-, and mid-congress professional tours, workshops, companion and family cultural/history activities may be found at www.18wcss.org Several of these activities are highlighted herein for your perusal and encouragement to participate. The *3rd and Final Announcement* for the WCSS Congress has recently been posted on the web site. Limited hard copies of this announcement will be distributed through the IUSS and national adhering members to the IUSS. Please note in the *3rd and Final Announcement*, new information on deadlines for Abstract submission, tour registration and costs, workshops, interdivisional symposium, exhibits, and other programmatic activities.
The following are important WCSS activities and dates to remember:

DATES TO REMEMBER

December 1, 2005 –	Deadline for abstract submission
November 1, 2005 –	Application deadline for WCSS Fellowship Program (for details see www.18wcss.org)
January 15, 2006 –	Convenors and co-convenors will finalize draft of scientific program Deadline for registration and full payment due for Pre and Post Congress Tours
February 1, 2006 –	Authors will be notified on the status of papers submitted.
May 1, 2006 –	Presenters not registered will be dropped from program and abstracts withdrawn from the CD-ROM. Convenors and co-convenors will have finalized scientific program. Registration fee will increase to $650

TOURS AND WORKSHOPS

The following is a list of the pre-, post- and mid-conference tours, tour leaders, tour leader e-mail address, dates for the tour, and costs; this plus additional information is provided at www.18wcss.org We strongly urge that you consider one or more of these tours to enrich your Congress experiences. You may contact the tour leader(s) via e-mail to gain further details on the tour. Registration and full payment for the tours are due by January, 15, 2006. Additional details on the venue and tour scope are given on www.18wcss.org and the *3rd and Final Announcement*.

Pre-Congress Conference Tours

Tour 2 – Semiarid Agroecosystem Management Systems (Irrigated and Dryland) in the Central and Southern Great Plains
Contact: Clay Robinson, West Texas A&M University
crobinson@mail.wtamu.edu
Tour starts: June 29, 2006, in Denver, CO
Tour ends: July 8, 2006, in Dallas/Fort Worth, TX
No. of participants: Minimum 30; Maximum 45
Cost: $1550

Tour 3 – Midwest and Mississippi Valley
Contact: Fred Young, USDA-NRCS (fred.young@mo.usda.gov or fred_young_3@yahoo.com)
Tour starts: June 28, 2996, in Chicago, IL
Tour ends: July 8, 2006, in St. Louis, MO
No. of participants: Minimum 30; Maximum 45
Cost: $2120

Tour 4 – Mexico, Biodiversity and Origin Center
Contact: Carmen Gutierrez Castorena (castor@colpos.mx)
Tour starts: July 1, 2006, in Mexico City, Mexico
Tour ends: July 6, 2006, in Veracruz, Mexico
No. of participants: Minimum 15; Maximum 30
Cost: $755

Tour 5 – Present Agriculture in Cuba
Contact: Olegario Munis, Instituto de Suelos (larenee@ceniai.info.cu)
Tour starts: July 2, 2006, in Havana City, Cuba
Tour ends: July 8, 2006, in Havana City, Cuba
No. of participants: Minimum 30; Maximum 45
Cost: $1350 US Dollars (estimated costs within Cuba)

Tour 6 – Alabama and Georgia Circle Tour
Contact: Warren Lynn, USDA Natural Resources Conservation Service (warren.lynn@nssc.nrcs.usda.gov)
Tour starts: July 2, 2006, in Atlanta, GA
Tour ends: July 7, 2006, in Atlanta, GA
No. of participants: Minimum 30; Maximum 45
Cost: $1180

Tour 7 – Acid Sulfate Soils of U.S. Mid-Atlantic/Chesapeake Bay Region
Contact: Del Fanning, University of Maryland (dsf@umail.umd.edu)
Tour starts: July 6, 2006, in Philadelphia, PA
Tour ends: July 8, 2006, in Philadelphia, PA
No. of participants: Minimum 30; Maximum 45
Cost: $550

Tour 8 – Paleosols, Paleoclimate and Paleoatmospheric CO_2: Paleozoic Paleosols of Central Pennsylvania
Contact: Steven G. Driese, Baylor University (Steven_Driese@baylor.edu), or Claudia I. Mora, University of Tennessee (cmora@utk.edu)
Tour starts: July 6, 2006, in Philadelphia, PA
Tour ends: July 8, 2006, in Philadelphia, PA
No. of participants: Minimum 30; Maximum 45
Costs: $610

Post-Congress Conference Tours

Tour 1 – Cryosols and Arctic Tundra Ecosystem (Previously Pre-Congress Tour)
Contact: Chien-Lu Ping, University of Alaska (pfclp@uaa.alaska.edu)
Tour starts: July 15, 2006, at Fairbanks, AK
Tour ends: July 22, 2006, at Fairbanks, AK
No. of participants: Minimum 15; Maximum 20
Cost: $2380
NOTE: Sleeping bags are required for the 4 night stay at Toolik Lake Station

Tour 9 – Pacific Northwest USA
Contact Duane Lammers, USDA Forest Service (dlammers@fs.fed.us)
Tour Starts: July 16, 2006, Portland Or/ BVancourver, WA
Tour endfsa July 222, 2006, Portland Or / VBancourvere WA
No. of participants: Minimum 30; Maximum 45
Cost: $1605

Tour 10 – Soils and Physiography of the Rocky Mountain Region
Contact: Gene Kelly, Colorado State University (pedoiso@lamar.colostate.edu)
Tour starts: July 16, 2006, in Denver, CO
Tour ends: July 21, 2006, in Denver CO
No of participants: Minmum 30; Maximum 45
Cost: $1230

Tour 11 – Desert Southwest USA Tour
Contact: H. Curtis Monger, New Mexico State University (cmonger@nmsu.edu)
Tour starts: July 16, 2006, El Paso, TX
Tour ends: July 24, 2006, Las Vergas, NV
No. of Participants: Minimum 30; Maximum 45
Cost: $2035

Tour 12 – Precision Farming and Midwest Agriculture
Contact: Harold F. Reetz, Jr., Foundation for Agronomic Research (hreetz@ppi-far.org)
Tour starts: July 17, 2006, in Chicago, IL
Tour ends: July 21, 2006, in Chicago, IL
No. of participants: Minimum 30; Maximum 45
Cost $1135

Tour 13 – Present Agriculture in Cuba
Contact: Olegario Muniz, Instituto de Suelos (larenee@ceniai.inf.cu)
Tour starts: July 16, 2006, Havana City, Cuba
Tour ends: July 22, 2006, Havana City, Cuba
No. of participants: Minimum 30; Maximum 45
Cost: $1350
Tour itinerary is the same as Tour 5: Pre Congress Tour.

Tour 14 – Alabama and Georgia Circle Tour
Contact: Warren Lynn, USDA Natural Resources Conservation Service (warren.lynn@nssc.nrcs.usda.gov)
Tour starts: July 17, 2006, in Atlanta, GA
Tour ends: July 22, 2006, in Atlanta, GA
No. of participants: Minimum 30; Maximum 45
Cost: $1195
Tour itinerary is the same as Tour 6which will be held as a Pre Congress Tour.

Tour 15 – Soils, Geomorphology, and Land Use in the Mid-Atlantic
Contact: M. J. Vepraskas, North Carolina State University (Michael_Vepraskas@NCSU.edu)
Tour starts: July 16, 2006, in Philadelphia, PA
Tour ends: July 24, 2006, Norfolk, VA
No. of participants: Minimum 30; Maximum 45
Cost: $1950

Tour 16 – Soils, Nutrient Management and Water Quality in the Northeastern U.S.A.
Contact: Peter Kleinman, USDA Agricultural Research Service (pjk9@psu.edu)
Tour starts: July 17, 2006, in Philadelphia, PA
Tour ends: July 22, 2006, in New York City, NY
No. of participants: Minimum 30; Maximum 45
Cost: $1795

Mid Congress Tours

Tour 17 – Stroud Water Research Center
Sponsor: USDA-NRCS
Contact: Stan Zadrozny, Township of Lower Marion (szadrozny@lowermerion.org)
No. of participants: Minimum 30; Maximum 90
Cost: $125

Tour 18 – Natural Lands Trust – Stroud Preserve
Sponsor: USDA-NRCS
Contact: Stan Zadrozny, Township of Lower Marion (szadrozny@lowermerion.org)
No. of participants: Minimum 30; Maximum 90
Cost: $170

Tour 19 – The Rodale Institute Regenerative Agriculture Tour, Crystal Cave, and Cabela's Outfitters
Contact: John Chibirka (john.chibirka@pa.usda.gov)
No. of participants: Minimum 30; Maximum 90
Cost: $180

Tour 20 – New Frontiers in Soil Survey
Sponsor: Chester County Conservation District and USDA-NRCS
Contact: John Chibirka (john.chibirka@pa.usda.gov)
No. of participants: Minimum 30; Maximum 90
Cost: $170

Tour 21 – Watershed Research and Management in Action
Sponsor: USDA-ARS
Contact: Andrew Sharpley (Andrew.Sharpley@ars.usda.gov)
No. of participants: Minimum 30; Maximum 45
Cost: $100

Tour 22 – Honey Hollow Conservation and Peddler's Village
Contact: John Chibirka (john.chibirka@pa.usda.gov)
No. of participants: Minimum 30; Maximum 90
Cost: $155

Tour 23 – The du Pont Family Legacy
Sponsor: DuPont Company, Longwood Gardens and University of Delaware
Contact: Gerald Hendricks (hendricks@udel.edu)
No. of participants: Minimum 30; Maximum 45
Cost: $185

Tour 24 – Cedar Meadows Farm and Lancaster County
Sponsor: USDA-NRCS and Lancaster County, PA
Contact: Ed White (ed.white@pa.usda.gov)
No. of participants: Minimum 30; Maximum 45
Cost: $165

Tour 25 – Soil Based Wastewater Treatment Technology and the Urban Rural Interface
Sponsor: Delaware Valley College
Contact: Larry Hepner (hepnerL@delvalcol.edu)
No. of participants: Minimum 30; Maximum 90
Cost: $100

Tour 26 – New Jersey Pine Barrens Soils Ecology
Sponsor: Rutgers University and USDA-NRCS
Contact: Joseph Heckman (heckman@aesop.rutgers.edu)
No. of participants: Minimum 30; Maximum 45
Cost: $155

Tour 27 – Sustainable Systems and Crop Modeling Research at Beltsville Agricultural Research Center
Sponsor: USDA-ARS
Contact: V. R. Reddy (vreddy@asrr.arsusda.gov)
No. of participants: Minimum 30; Maximum 90
Cost: $135

Tour 28 – Animal and Natural Resources Research at the Beltsville Agricultural Research Center
Sponsor: USDA-ARS
Contact: V. R. Reddy (vreddy@asrr.arsusda.gov)
No. of participants: Minimum 30; Maximum 90
Cost: $135

COMPANION & FAMILY CULTURAL/HISTORICAL ACTIVITIES

The following is a list of companion, family and cultural/historical activities for you to choose from. All activities can be registered for when you arrive at the Congress. The duration and cost of the activities vary and several are offered on different dates. You may find additional information from the web site list for these tours and additional details in www.18wcss.org Plan on joining your friends and colleagues for some of these events.

Sunday, July 9 –	The Barnes Foundation – Four hours
	Historic Philadelphia – Four hours
Monday, July 10 –	Philly's Kitchen – Two hours
	Longwood Gardens – Four hours
	Valley Forge – Four hours

Tuesday, July 11 – Brandywine Valley – Seven hours
Atlantic City – Eight hours
Shop 'till you Drop! – Shopping at King of Prussia – Six hours
Italian Market – Three hours
Lions, Tigers and Bears…Oh My! – The Philadelphia Zoo – Three hours
Mural Arts Tour – Two hours
Spirit of Philadelphia – Dinner Cruise

Wednesday, July 12 – Battles of the Delaware – Four hours
Pennsylvania Dutch Country – Eight hours
Philadelphia In High Style – Six hours
Cocktails to Go – Hour & Half Evening Tour

Thursday, July 13 – Peddler's and Pearl's – A trip to Bucks County – Seven hours
Winterthur – Five hours
Wok & Walk – Three hours
Cannons and Capone – Eastern State Penitentiary & Fort Muffin– three hours
Shopping In Manayunk – Four hours

Friday, July 14 – Fairmont Park and Park Houses – Three hours
Presidents and Generals in Germantown – Four hours
Moonlight, Cheesesteaks & Light of Liberty – Four hours

INTERDIVISIONAL PROGRAM ACTIVITES

We call your attention to two special interdivisional programmatic activities of the WCSS. The major purposes of these programs are to caption global priorities in soil science research and global concerns about soil science education. The two activities are listed below with additional information detailed on www.18wcss.org Plan to attend these activities and contribute to the goals of soil science and the geosciences.

Global Priorities in Soil Science Research:
Sponsor: USA National Science Foundation
Date: July 9, 2006, 2:00-5:00 PM
Cost: No charge but registration required

Inter-Divisional Symposia:
Innovation, Speculation and Disneyfication in Soil Science Education
Convenor: Alex McBratney (Australia)
(Alex.McBratney@acss.usyd.edu.au)
Co-Convenor: Alfred Hartemink (Netherlands)
(Alfred.Hartemink@wur.nl)

Please take this opportunity to participate in the World Congress and share your research, teaching and service experiences with other World Congress participants. This will be the first World Congress held in the USA since 1960. Every effort is being made to make your participation and attendance worthwhile. The venue is excellent, the program is comprehensive, and there are sufficient scientific, professional, social, cultural, and historical activities for all. Please don't forget the deadlines for registration, abstract submission, and professional tours. Last but not least, check the web site. www.18wcss.org for the *3rd and Final Announcement.*

Lee Sommers and Larry Wilding

Co-Chairs, WCSS Organizing Committee

Don Sparks selected for top USDA honor

Donald L. Sparks, president of the IUSS, S. Hallock du Pont Chair of Plant and Soil Sciences and chairperson of the Department of Plant and Soil Sciences at the University of Delaware, has been selected as the 2005 Sterling B. Hendricks Memorial Lecturer by the U.S. Department of Agriculture's Agricultural Research Service.

"Don Sparks has built a world-class program in soil chemistry at the University of Delaware," Robin W. Morgan, dean of UD's College of Agriculture and Natural Resources, said. "His work crosses a variety of disciplines, and he has trained many scientists and shared his expertise with others worldwide. We are delighted that the Agricultural Research Service and the American Chemical Society Division of Agriculture and Food Chemistry are recognizing Don with this award."

The lectureship was established in 1981 by the agency to honor the memory of Sterling B. Hendricks and to recognize scientists who have made outstanding contributions to the chemical science of agriculture. For Sparks, the honor holds special meaning. "I was aware of the lectureship and understood it to be very prestigious," Sparks said. "As I learned more about Hendricks, it grew to mean even more to me. He was a superb researcher who did outstanding work in areas very close to the field in which I am interested. I am delighted to be so honored."

During a long and distinguished career with the USDA, Hendricks contributed to many diverse scientific disciplines, including soil science, mineralogy, agronomy, plant physiology, geology and chemistry. He is most frequently remembered for discovering phytochrome, the light-activated molecule that regulates many plant processes.

Sparks knew that the scientist had been a student of Linus Pauling, the two-time Nobel laureate, and was quite famous for his work in clay mineralogy. Some of his earliest work helped identify clay minerals in soils.

"Hendricks was one of those bright people who can find success in many fields," Sparks said, noting the chemist was a member of National Academy of Science and was presented the National Medal of Science in 1975. The lecture is a forum for a presentation on a policy, trend or scientific development. Sparks said he plans to discuss his own research and also the importance of providing increased funding for basic research. Sparks' research group has been conducting research on metal and oxyanion reaction mechanisms on mineral surfaces and soils. They employ synchrotron radiation techniques at national laboratories to determine at a molecular scale how contaminants are bound to natural surfaces and in what forms (species) they are present. Such data are critical in making decisions about mobility and bioavailability of contaminants in the environment. The group also has been working with hyper-accumulator plants, which are able to ingest large quantities of metals from contaminated soils and thereby assist in environmental remediation.

Previous lecturers have included Robert Buchanan of the USDA; the late Kriton Hatzios, formerly a professor at the Virginia Polytechnic Institute and State University and director of the Virginia Agricultural Experiment Station; Irvin E. Liener, professor emeritus of the University of Minnesota; Malcolm J. Thompson, a chemist with a number of government agencies including the USDA, the National Institutes of Health and the Department of the Interior; Hugh D. Sisler, professor emeritus of the University of Maryland; and Peter S. Eagleson, professor emeritus of the Massachusetts Institute of Technology.

Sparks received a bachelor's degree in agronomy and a master's degree in soil science from the University of Kentucky and earned a doctorate in soil physical chemistry from Virginia Polytechnic Institute and State University. He joined the UD faculty in 1979 and has been chairperson of the Department of Plant and Soil Sciences since 1989. He is the author of three textbooks on soil chemistry, 38 book chapters and 152 refereed papers. He has also edited 40 volumes of *Advances in Agronomy*, the most prestigious serial review in the fields of soil and crop sciences. Additionally, he has edited 14 other books and monographs.

Sparks has presented his research findings at 65 universities and institutes around the world. He has also served as adviser and mentor to 39 graduate students and 18 postdoctoral researchers. He is a fellow of the American Association for the Advancement of Science, the Soil Science Society of America and the American Society of Agronomy. He is the recipient of numerous awards, including the M.L. and Chrystie M. Jackson Soil Science Award, the Soil Science Research Award, the McMaster Fellowship, the Gold Medal Award from the Polish Society of Soil Science and the Environmental Quality Research Award. Sparks is past president of the Soil Science Society of America, and is president of the International Union of Soil Sciences.He was the 1996 recipient of UD's prestigious Francis Alison Award, which was established by the UD Board of Trustees to recognize the scholarship, professional achievements and dedication of members of the faculty, and in 2002 was the first recipient of the UD Outstanding Doctoral Graduate Student Advising and Mentoring Award.

Article by Neil Thomas
Photo by Duane Perry

Now's the Time!
Move Smithsonian Soils Exhibit Past $1 Million

The ASA-CSSA-SSSA Boards of Directors issued a Matching Challenge Grant to members and attendees at this year's meetings in Salt Lake City. The societies agreed to match any contributions made to the Smithsonian Soils Exhibit during the annual meetings, up to a total dollar amount of $35,000. Even if you are unable to attend this year's meetings, we invite you to still help meet this challenge.

As part of the "Now's the Time!" campaign and as an additional incentive, your gift(s) would also qualify for recognition at the combined gift and matched amount; for example, a $500 gift would be matched and then qualify for recognition at the $1,000 level. That means you can double what you do to send the message of soil science and education to more than six million visitors a year!

Under this scenario, the goal would be to reach $100,000 total for the annual meetings ($50,000 from attendees and $50,000 from the societies and ASF, who is considering joining the matching challenge grant). If that goal is reached, it would put us over the $1 million mark, 25% of the way towards the total goal of $4 million ($2.5 million for the 6,000 square foot, on-site, interactive exhibit and $1.5 million for the traveling, educational exhibit).

Concept design has just been completed for the Smithsonian Soils Exhibit and both the Exhibit Developer and Lead Designer will be in Salt Lake to unveil these plans. Depending on funding, draft and final design will take place in 2006, fundraising will progress through 2007, and the opening of the exhibit is scheduled for 2008 at the National Museum of Natural History in Washington, DC. More information on the project can be found at http://www.soils.org/smithsonian/

If you've been thinking about contributing, but haven't, NOW is the time! Here's how.

1) In advance of the Annual meetings

If you can't make the meetings in Salt Lake this year or would just like to take advantage of this opportunity in advance, please make your check payable to ASF, with "Now's the Time!" on the memo line, and mail with your registration or send separately to ASF, 677 S. Segoe Rd., Madison, WI 53711.

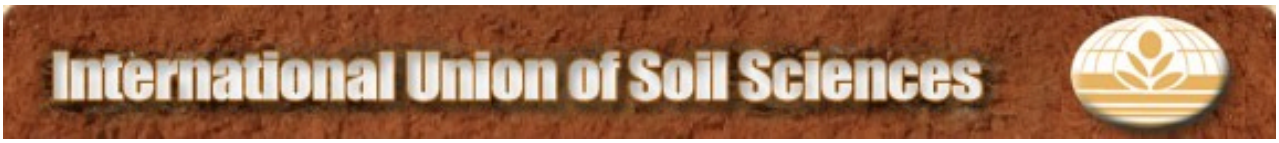
2) At the meetings

If you'd like to make a gift at the meetings in Salt Lake, please make your check payable to ASF, with "Now's the Time!" on the memo line, and give your contribution to a Society staff member at the on-site registration table, located in the East lobby of the convention center. Credit card gifts will also be accepted here. For your convenience, contributions may be made as pledges over the next three years (2005-2007), with the exhibit scheduled to open in 2008, or earlier, depending on funding. If you'd like to designate your gift towards a specific state soil monolith that will be featured as part of the exhibit, please note that when you make your gift.

"Now's the Time!" Q & A and Reception 7th November 2005 in Salt Lake

Both the Smithsonian's Exhibit Developer, Barbara Stauffer, and the head of the design firm (Beth Miles of mfmdesign in DC) will unveil the recently completed concept design materials in Salt Lake. We invite you to meet them at this special event, called, "Now's the Time: A Q&A with the Smithsonian Soils Exhibit Designers," on Monday, November 7, from 3-4 p.m. This event will be held at the Marriott Downtown in Grand Ballroom Salon F, Lobby Level, and be followed by a Smithsonian Reception from 4-5 p.m. Also visit us at Booth 427

IUSS Alerts May – September 2005



IUSS Alert
Information for and from the global soil science community

This is a new IUSS service: the **IUSS Alert** in which we inform our members on upcoming soil science activities, vacancies and any other information that should be distributed promptly amongst the global soil science community. If there is any information that you would like to have included please send it to: alfred.hartemink@wur.nl and we'll include it in the next IUSS Alert. Again, this is only for information for which speed is required - other information will go into the IUSS Bulletin that is published twice per year. Currently, the IUSS Alerts are e-mailed to more 10,000 people across the globe. A summary of some of the May to Spetember 2005 issues of IUSS Alerts is given below (information that is no longer relevant is not listed, check the IUSS website at www.iuss.org for contents of the IUSS Alerts).

Editor-in-chief for the journal, *Arid Land Research and Management*

The Taylor & Francis Group, an international publisher of academic, peer-reviewed journals, is currently looking for an editor-in-chief for the journal, *Arid Land Research and Management*. I'm sad to announce that the journal's longtime editor, Dr. John Skujiñ, has recently passed away. *Arid Land Research and Management*, currently in its 19th volume year, publishes 4 times per year and approximately 400 pages. This position includes a quarterly honorarium payment. *Arid Land Research and Management* is a common outlet and a valuable source of information for fundamental and applied research on soils affected by aridity. This journal covers land ecology, including flora and fauna, as well as soil chemistry, biology, physics, and other edaphic aspects. The journal emphasizes recovery of degraded lands and practical, appropriate uses of soils. Reports of biotechnological applications to land use and recovery are included. Full papers and short notes, as well as review articles and book and meeting reviews are published. All manuscripts are peer-reviewed for quality and acceptability before publication. Arid Land Research and Management is a cooperating journal of the International Society of Soil Science. Please go to the following link for additional information: http://www.tandf.co.uk/journals/titles/15324982.asp If you are interested in being considered for editor-in-chief of the journal, or would like to suggest someone else for the position, please contact Andrew Moyer, Managing Editor, Taylor & Francis andrew.moyer@taylorandfrancis.com

Books reviewed in the IUSS Bulletin now all on the web

All books reviews by Hans van Baren since 1999 have been put on our website: http://www.iuss.org/pages/publications.htm Browse through these books by using CONTROL F. If you have a book that is relevant for the soil science community please send us a review copy and we will include it on the web and in the IUSS Bulletin. Send the book to: IUSS-ISRIC, PO Box 353, 6700 AJ, Wageningen, The Netherlands.

Year of Planet Earth brochure on soil now published

The *International Year of Planet Earth* project was conceived by the International Union of Geological Sciences (IUGS) and UNESCO. The *Year* now enjoys the backing of all relevant IUGS sister unions in ICSU, including the IUSS. It has now won the full political backing of 16 nations, together representing half of the world population. The brochure "Soil - the Earth's living skin" can now be downloaded from the website http://www.esfs.org/downloads.htm (brochure is 2.3 Mb). This is part of the Outreach

Programme, which will operate as a funding body, receiving bids for financial support that will help register and reinforce the central message of the *Year* in the mind of the general public and decision-makers. The *International UN Year of Planet Earth* offers soil science a suite of opportunities. It might provide a prominent platform for the launching of a 'World Soils Day' and be used to generate outreach towards the 2006 IUSS World Congress in Philadelphia, together with numerous related activities. Soil scientists may also recognize the relevance of their science in several of the *Year's* science themes, for example in Health (dust problems), Climate (palaeosol records), Resources (soil: a renewable resource?) Megacities (urban soils), and Hazards (risk of soil loss). For further information on see http://www.esfs.org

Access to Global Online Research in Agriculture (AGORA)

The AGORA site provides access to 745 journals from major scientific publishers in the fields of food, agriculture, environmental science and related social sciences. AGORA is available to students and researchers in qualifying not-for-profit institutions in eligible developing countries. To date, 400 institutions in 55 countries - from the 69 countries eligible - have registered to use AGORA's valuable online resources. Moreover, eleven publishers have joined the initiative in addition to the nine founding publisher partners. The content available through AGORA now comprises almost 600 key journals in food, nutrition, agriculture and related biological, environmental and social sciences. This is making a significant impact on researchers, students and others in the scientific community in developing countries and countries in transition. In fact, FAO and its partners such as Cornell University are seeking to increase participation from users and publishers even further, and are reaching out to those countries which, as of yet, have no subscribers. It was also agreed that particular attention needs to be paid to improving accessibility of AGORA content for organizations with poor connectivity.
Website: http://www.aginternetwork.org/en/

Jeff Sachs keynote speaker at 18th World Congress of Soil Science

Jeffrey D. Sachs is the Director of The Earth Institute, and Professor of Sustainable Development, and Health Policy and Management at Columbia University. He is also Director of the UN Millennium Project and Special Advisor to United Nations Secretary-General Kofi Annan on the Millennium Development Goals. Sachs is internationally renowned for advising governments in Latin America, Eastern Europe, the former Soviet Union, Asia and Africa on economic reforms and for his work with international agencies to promote poverty reduction, disease control, and debt reduction of poor countries. He was recently named among the 100 most influential leaders in the world by Time Magazine. He is author of hundreds of scholarly articles and many books. His most recent book is: *The End of Poverty: Economic Possibilities for Our Time.* Reports from the Millennium project can be downloaded http://www.unmillenniumproject.org/reports/reports2.htm including the report "Halving hunger: it can be done" authored by Pedro Sanchez and M.S. Swaminathan.

Fellowship applications for the 18th World Congress of Soil Science

Limited funds have been budgeted to support registration waivers ($550) and to provide housing (maximum $650) at the University of Pennsylvania for selected participants from Group II and Group III countries. Travel funds are not available. Applications must be received by November 1, 2005. More information click here

New Working Groups: Digital Soil Mapping & Hydropedology

Two new IUSS working groups have been formed: Digital Soil Mapping and hydropedology. To read about Digital Soil Mapping check their website www.digitalsoilmpapping.org All newsletters of the Digital Soil Mapping Hydropedology Working Group are available on the IUSS website

Any composers and text writers out there?

For the 2006 World Congress of Soil Science we would like to launch a soils anthem – a song about soils, its users and about soil science and soil scientists. We need lyrics and music. Anyone interested to write the IUSS soils song please contact alfred.hartemink@wur.nl Eternal fame may fall on you.

Spatial news - Visual excitement

Google has now Google Earth, which enables users to virtually go anywhere on the planet and see places in photographic detail. It is a 3D model of the real world, based on real satellite images combined with maps. You can zoom from space to street level instantly and then pan or jump from place to place, city to city, country to country. You need to download some software at http://earth.google.com It is brilliant, and it's free. But who is going to put the soil map underneath? Another exciting development is advanced GPS-photo link software. It automatically maps photos and locates them on aerial and satellite images and street or topographic maps. It works with any GPS and any digital camera and links your photos to their location without having to connect the two devices. Click http://spatialnews.geocomm.com/dailynews/2005/jul/25/news2.html for more details.

New website on long-term soil experiments

There is a new website on long-term soil experiment: http://ltse.nicholas.duke.edu/ With long-term soil experiments it can be observed how soils change over years and decades to centuries, and how soils interact with global changes over these time scales: chemically, biologically, and physically. Currently, there are more than 125 experiments in the inventory – more are wanted.

Soil maps of Africa – online!

Soil maps of Africa have been scanned and are now available http://eusoils.jrc.it/esdb_archive/EuDASM/Africa/index.htm as part of the European Digital Archive of soil maps (EuDASM). The maps (1920s – 1990s) can be searched by country, year, scale, or keyword. Maps can be viewed and downloaded as JPG.

Five Questions to a Soil Scientist
Five Questions to Lou Mendonça-Santos

Name: Maria de Lourdes Mendonça-Santos
Age: 42
Address: Rua Jardim Botânico, 1024, 22.460-000 Rio de Janeiro, RJ, Brazil
E-mail: loumendonca@cnps.embrapa.br
Position: Senior Soil Researcher at EMBRAPA Solos – Brazilian Agricultural Research Corporation, National center of Soil Research, since March 1990.

1. When did you decide to study soil science?

In the Agronomy Graduate School I was touched by childhood´s memories, when I used to spend my school vacations in a farm and had the opportunity to see how the land was prepared for crops and pastures and how important it was for survival. All that memories came out and rose again as soon as I started the first semester, and the books and classes I liked best were just the soil science text books.

2. Who has been your most influential teacher?

Professor Doracy Pessoa Ramos in the Rural Federal University of Rio de Janeiro when I was doing my Master Degree. Soil Genesis and Morphology including soil description and

classification, as well as Land Use Planning where disciplines he teaches with lots of passion. As part of the final exam, the soil excursion was a classic! Eight days in a bus, stopping at different soil profiles, where each one of us was selected to describe and write down the morphological soil characteristics just like the soil surveyors and classifiers do in real soil survey field work. No one could say anything during the examination. Lots of pressure each day, but lots of fun at night in the small towns around Rio de Janeiro.

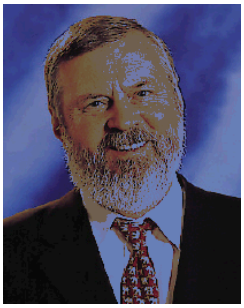
3. What do you find most exciting about soil science?
The soil nature and the soil landscape relationships. I am always impressed with how much we can "read" from a soil profile!

4. How would you stimulate teenagers and young graduates to study soil science?
Taking them out in the field, showing how soils may be different from place to place, why they change and the role the soils have to food production and life survival .

5. How do you see the future of soil science?
New knowledge produced from the integration of all branches of soil science and correlate disciplines, available for all around the world: soil and environment as a tool for better integration among people around the world.

Five Questions to Karl Stahr

Name:	Karl Stahr
Age:	60 Years
Address:	Hohenheim University, Institute of Soil Science and Land Evaluation, 70593 Stuttgart, Germany
E-mail:	kstahr@uni-hohenheim.de
Position:	Prof. of Soil Science and Petrography



1. When did you decide to study soil science?
After a basic course in Geology in 1966, I decided to specialize in Soil Science. I had interest in the development of the whole earth crust, like the formation of mountain ranges. However, I felt that I would be able to learn and explain more about the skin of the earth than about the deeper parts of the lithosphere.

2. Who has been your most influential teacher?
My first teacher was Eberhard Ostendorff, a student of Stremme. He was contributing to the first soil map of Europe. I learned to love soils from him. My second teacher was Ernst Schlichting, here I learned strict scientific methods – how to come from observation to conclusion and how to form hypothesis. My third teacher was Heinz W. Zöttl. He taught me the basics of plant nutrition and especially a realistic way to do science in practice and to be successful in the university business. Beside these teachers Hans-Peter Blume had a strong influence because he followed my way helpful, critical and always positive from the beginning of my PhD until today.

3. What do you find most exciting about soil science?
Soils are unknown objects. However, if you have some tools in your hand, you can observe a lot and soils start to tell you stories about their development and future. In the last years I especially have been interested in soil zooming, coming from the landscape going into specific key soils, observing the beauty of horizons and their sections and then analyzing the architecture of aggregates and the form and structure of soil minerals, even they will tell you at the end something about the landscape again.

4. How would you stimulate teenagers and young graduates to study soil science?
I like it and I would like to be more successful in the future. I like telling stories about soils to young people by using statements and explaining them which may draw their attention. Soils are the skin of the earth. Soils are fantastic, interesting natural laboratories. Soils are beautiful and they do beautiful things. Soils have no borders, but transitions. Soils are the biggest gene resource of the world.

5. How do you see the future of soil science?
Soil science is a young discipline and is very powerful. It has especially to improve it theory. However, the problem of soil science in a world, where economy rules almost everything is a problem, that it has not found a close connection to big business. On a long term, soil science needs enthusiastic researchers to improve the basic knowledge. On the short term it needs more advertising to come into the view of decision makers. We already have the king of Thailand among our sponsors. Let's move on.

Five Questions to Lyn Abbott

Name:	Lyn Abbott
Age:	57
Address:	School of Earth and Geographical Sciences Faculty of Natural and Agricultural Sciences, The University of Western Australia, Crawley, Western Australia 6009
E-mail:	labbott@cyllene.uwa.edu.au
Position:	Professor and Head of School

1. When did you decide to study soil science?
I did not make a clear decision to study soil science – it began as part of my botany degree – the aspect of soil science I studied first was soil microbiology.

2. Who has been your most influential teacher?
I was inspired to study soil microbiology by a plant pathologist, Dr Peter Valder, at the University of Sydney.

3. What do you find most exciting about soil science?
I am very enthusiastic about the fact that soil is the skin of the earth and as such is so essential for life on our planet. I enjoy thinking about soil as a habitat for an enormously diverse array of organisms – which is a good excuse to use one's imagination. How might soil appear to its inhabitants? This leads to consideration of what happens to the organisms that live in soil when it is disturbed and how we might understand soil processes sufficiently well to manage them effectively.

4. How would you stimulate teenagers and young graduates to study soil science?
A good place to start is to investigate the diversity of soil fauna with a microscope – this can lead to microscopic comparisons of different soil types, soil structure, mineral and organic composition of soil. Such an investigation raises questions about how soils form. Dissecting microscopes are useful because they immediately trigger questions and amazement. We have a great opportunity to demonstrate to young people the importance of soil to ecosystem function – including food production systems. They probably don't think much about how plants grow in soil, how they get their nutrients or understand why soils are very different depending on their origin and what is growing in them.

5. How do you see the future of soil science?
Yes, I see a future for soil science – but it is necessary to make a considerable effort in demonstrating the importance of soil within the scientific and broader community. Fortunately, gardeners usually have a very positive attitude to soil, so these people should

be nurtured. On the other hand, many young people grow up today without even visiting a vegetable garden or a farm. We need to keep information about soil in the media – indeed as I went to work last week there was an item on a national news program about soil microbiology – I thought we had come of age!! Let it continue.

My favourites in Soil Science – books!

The favourite books of Gan-Lin Zhang (China)

Good books are teachers and friends. In the past 20 years of my study and career related to soil science, it is books that have inspired me all the way. To choose only three books as the most favourite ones is a difficult, however, I made up my minds that there were several books helped me substantially and gave me great inspirations.

The first one is Soils of China (Science Press, 1978). When I studied soil science and agrochemistry in early 1980s in Huazhong Agricultural University, Wuhan, it was the most comprehensive book I could find about the soils in China at that time. Actually not only the soils in all geographical regions of China are described, but also the basic soil formation and distribution theories, soil physical and chemical phenomena and their explanations, soil use and management and the related principles are detailed. What's interesting is that the first (1978) version was actually completed during Chinese Cultural Revolution, so chapters about soil use and management rather than about principles and theories are presented first in the book, to be "politically (ideologically) correct". Its second version appeared in 1987 and updated with research progress, including the rearrangement of the chapters. The more than 1000 page English version appeared several years later in early 1990s.

My second choice is The Chemistry of Submerged Soils by F.N. Ponnamperuma, which is not a book in a strict sense, but a chapter of Advances in Agronomy (1975, Vol 24: 29-96). Paddy soils are a special type of soils, but whatever the soils are the fundamental science principles apply, this is the book tells and implies. I believe that researchers especially those working on wetland soils can benefit much from reading it. This book was my favourite reference when I completed my doctorial dissertation on paddy soils.

Another of my most favourite is Pedogenesis and Soil Taxonomy by L.P. Wilding, N.E. Smeck and G.F. Hall (Elsevier, 1983). Although it is contributed by a group of authors, the book is a well-organized system by itself. Many aspects of soil genesis are discussed in-depth and one can better understand the basic laws behind soil formation through the chapters. Based on the understandings about how the soil forming factors driving soil processes, the soil classification becomes much easier to follow. I perceive it as a necessary book for all who want to study soil process and characterization in the context of space and time.

The favourite books of Alessandro Piccolo (Italy)

An essential reference in Soil Chemistry is certainly the book of Dr. F.J. Stevenson on "*Humus Chemistry: Genesis, Composition, Reactions*" (Wiley) in either the first edition of 1982 or in the more updated second edition of 1994. The book have represented, and still does, the first comprehensive effort to introduce a rigorous chemical approach into one of the most important fields of Soil Science, though long neglected: the Chemistry and Reactivity of Organic Matter. While two important books were either published or edited earlier by Dr. M. Schnitzer, mainly as a report of experimental works, the book of Stevenson attempted for the first time to give a systematic frame to the scientific advances in the field of humus chemistry. I remember to have used the lectures notes of Dr. Stevenson's course on Soil Organic Matter during my research work at the University of Illinois at Urbana-Champaign, before they became the core of the book to come. As an organic chemist, I was impressed by the rigorous chemical approach adopted by Frank Stevenson in his book that was, and still is in some way, quite different from the

contemporary literature on soil organic matter that rather showed an agronomic approach. Being above all a textbook for students, the book introduces the reader to modern physical-chemical techniques to study the molecular structure of humus, thereby providing to young Soil Chemists the keys to shift from the traditional "soft" to the today-required "hard" humic Science. It is impossible to underrate the paramount importance of this book in the history of Soil Science.
Another book on soil chemistry to be cited is "*Cycles of Soil*" (Wiley, 1999) by F.J.Stevenson and M.A.Cole. This text is particularly valuable as a follow-up of the previous Stevenson's book on Humus Chemistry. The merit of this volume is to adopt an environmental approach to describe the behaviour and significance of the different plant nutrients and micronutrients present in soil. Again, the text is scientifically rigorous and well integrates the chemistry of the cycling elements with their biochemical and microbiological processes.
Finally, a recent book that I find very innovative and valid for both teaching and research perspectives is: "*Handbook of processes and modelling in the soil-plant system*" (Haworth Press, 2003), edited by D.K. Benbi and R. Nieder. The main innovation of the book is to regard the relationship between the soil and the plants as a whole system, thereby making a considerable advance in the necessary systemic approach of Soil Chemistry. However, while the different chapters are well written and up-dated, they somewhat fail to respect the promises contained in the title and mostly (but not all) present soil and plants as still separate issues. The second merit is to have introduced concepts and techniques of modelling of soil-plant processes with a commending critical approach by showing advantages and disadvantages of the contemporary modelling state of the art. A very valid book also for teaching purposes.

The favourite books of Achim Dobermann (USA)

One of my favorite soil science books is *Statistical methods in soil and land resource survey* by Richard Webster and Margaret Oliver, published in 1990. I got my hands on it shortly after completing my PhD thesis. I read through it within a few days and it almost made me wish to start all over with my thesis research. Having depleted all financial resources that was not a viable option, but Webster's and Oliver's book has accompanied my work and that of my students since then. As a graduate student I became fascinated with soil spatial variability and the statistical methods emerging in the 1980s provided many new and exciting opportunities for doing such work. What was desperately missing was a good textbook explaining all this to the soil science community. Webster and Oliver guide the reader logically and with surprising ease through an array of statistical concepts and methods that are now known as pedometrics and have evolved into an entire sub-discipline of soil science. This book has set the standard for all others that have followed in recent years.
A second book I have always enjoyed much is the *Booker Tropical Soil Manual*, edited by J.R. Landon and published by Longman Scientific & Technical in 1984 and 1991. This book is an amazing collection of knowledge needed for many soil related studies, with a strong emphasis on professionals engaged in soil survey and land evaluation. What is often scattered throughout the literature is here brought together in a handy collection of facts. There is nothing fancy about this book: just plain text, numerous tables, simple black and white graphs, and more than 200 pages of useful annexes. Those who want to get involved in a soil survey will certainly enjoy reading the annex on planning and logistics. You will find information for just about any question you may face in the field and at 474 pages this is still a book one can take along on a field trip. It's getting a bit outdated, so hopefully someone can take on the task and produce a new edition soon.
Finally, my newest favorite is *Australian soils and landscapes* by Neil McKenzie, David Jacquier, Ray Isbell and Katharine Brown (CSIRO Publishing, 2005). This is a beautifully illustrated compendium for the broader audience, nicely illustrating how soils evolve within the context of landscape development and how they contribute to ecosystem functioning. The professional soil scientist will not find much new information in this book in terms of general principles and processes of pedogenesis, but what makes this book stand out is

the simplicity of language used and the quality of the numerous photographs and illustrations. Simply well done and this is the kind of books that will greatly help expanding the public's interest in soils. I'd like to have a book like this for every country in this world.

The favourite books of Meine van Noordwijk (Indonesia)

Nye, P.H. and Greenland, D.J., 1960. *The soil under shifting cultivation.* CAB, Farnham Royal (UK)

Nye, P.H. and Tinker, P.B., 1977. *Solute Movement in the Soil-Root System*, Blackwell, Oxford, UK, 342 pp.

Mohr, E.C.M., 1933. De bodem der tropen in het algemeen en die van Nederlandsch-Indie in het byzonder (or in more internationally accessible form: Mohr, E.J.C., van Baren, F.A. and van Schuylenborgh, J., 1972.Tropical soils: a comprehensive study of their genesis. 3rd edition. Mouton – Ichtiar Baru – van Hoeve, The Hague)

Starting from a plant ecological perspective, working on root systems and the way they link soil fertility to plant growth, the three mentioned books helped me appreciate soils and in particular the soils of the tropical domain. *Nye and Greenland* made a lot of the older work in the english-speaking tropics on soil management accessible, and under the simple title a good mix of practical and process-related research is described. The book is still worth reading.

The *Nye and Tinker* book gave a good overview of the next two decades of detailed exploration of the processes that govern solute transport to roots, with well-designed experiments, improved measurement techniques and a key role for mathematical modelling techniques.

In Bogor we recently celebrated hundred years of the Indonesian Soils research institute, of which Mohr was director for some time. Retrieving a 1908 publication by him, I was struck by the careful analysis of complex issues of silt load of rivers. In those days, silt loads were a positive attribute as they provided fertility to rice fields, but some of the sediments had negative impacts on the rice. Mohr traced the source to a small part of the catchment with a specific geological history. Reading this early work, his later comprehensive account of soil genesis was actually based on very practical problems. Much of today's public debate on environmental impacts of land cover change could benefit if soils weren't just perceived as colours on maps, but the highly diverse entities that Mohr described. *Mohr*'s book (and later editions of it) summarize much of it, although for some real gems one still has to read the original publications in Dutch.

Appeal for Early Tropical Soil Survey Information

I am writing a book on Soil Survey in British Overseas Territories of the Tropics. Some 60 colleagues and friends have already sent information and recollections. If there are others who were Soil Surveyors in the British Colonies (including non-British Colonial officers) before about 1975, I should be most grateful if you would get in touch. Also, if you were among the *earliest local Surveyors*, when expatriates were replaced by local staff, I am very keen to contact you. Finally, can anyone help me trace descendants of the great pioneers: Fred Hardy, Colin Trapnell, Geoffrey Milne, Frank Martin, Arthur Hornby, and Cecil Charter? Photographs of these would be welcome. My warm thanks to all respondents.

Prof. Anthony Young
Email: anthony.young@land-resources.com

The Myth of Sustainability

The word 'sustainability' has been so misused in public debate as to be virtually meaningless. Rarely is a time frame considered in discussions of what is or is not 'sustainable'. For example, human activities based on the combustion of fossil fuels are unsustainable when the frame of reference is a few hundred years. Cropping in the sheep-wheat belt of southwestern Western Australia has become unsustainable for a substantial number of farmers over a period of decades. A similar time frame for unsustainability applies to crop and pasture production that relies on flood irrigation in parts of the Murray-Darling Basin.

Because Earth's climate has been changing over geological time, and has frequently been perturbed by major events such as meteorite impacts and huge volcanic eruptions, there is nothing static about its ecosystems. These ecosystems have adapted to change – species have been extinguished and new species have evolved that are better adapted to the changed conditions. Any concept of sustainability based on preserving the status quo, as we see it now, is an anthropocentric view. Also, given that change is the natural order, it is an unrealistic view, indicative of an attitude that underlies objections by conservationists to the logging of native timber, even though selective logging annually of a small proportion, about 1 per cent, allows time for regeneration and the growth of young trees to maturity.

An ecosystem that is experiencing slow change at a steady rate, either naturally or through human influence, is in 'steady state'. Although in a state of flux, if the inputs of matter and energy balance the outputs under the prevailing climate, such a system is sustainable. A small segment of the system, rotated around, can be exploited for production provided that sufficient time is allowed in the whole cycle for regeneration of natural vegetation and soil fertility in each segment. An example is the system of 'shifting cultivation' that was practised successfully in the tropics for centuries, but is now derided as merely 'subsistence agriculture'. A somewhat different example is described in F. H. King's book 'Farmers of Forty Centuries'. King wrote that before the modern era, for over 4000 years Chinese farmers had grown enough food to support large families by terracing sloping land, rotating their crops and returning all available human, animal and plant waste to the soil.

Subsistence agriculture has been replaced in most parts of the world by farming for profit. As a consequence, modern farmers tend to use the words 'viable' and 'sustainable' interchangeably. If farmers can extract sufficient production from their land for income to exceed expenditure, they are financially viable and consider they are farming sustainably. The time frame for making this judgement varies, depending on the enterprise. For example, in the grazing districts west of the Darling River in New South Wales the time frame may be 10 years of which nine years are years of loss, but enough money is made in the 10th year to cover all the losses and yield an overall net profit. The grazing enterprise is considered sustainable even though the land may have suffered irreversible degradation during the 10 year period. However, in the irrigated dairy region of northern Victoria, one bad year in which there is a minimal allocation of irrigation water may well put a heavily indebted producer out of business.

In Australia, the mismanagement of water has become a major impediment to sustainable farming. For many years, scientists have written about the encroachment of dryland salinity due to excessive clearing of native vegetation and its replacement by annual crops and pasture plants. Graphic images of the wheat-sheep belt of southwest Western Australia, one of the worst affected regions, are frequently shown in the media. However, an equally serious problem exists with the rivers of the Murray-Darling Basin where there are critical water shortages due to the over-extraction of water for an expanding irrigation industry.

Given the well-known variability of the Australian climate and predictions from climate-change modelling that parts of eastern Australia are likely to get warmer and drier in the next 50 years, it is understandable that farmers wish to ensure the viability of their cropping and pastoral enterprises through irrigation. However, the efficiency of water delivery through unlined channels and of water application in flood and furrow systems is poor, so the demand for water is greater than it would be if better irrigation infrastructure

existed. Further, large amounts of water are used for crops such as rice and pastures for sheep production, for which the dollar return per megalitre of water is small compared with horticulture, viticulture and dairying. Because of this heavy demand for irrigation water, the natural flow in many of the rivers has been reduced to very low levels, a condition exacerbated by drought in eastern Australia. For example, the Darling River at the Wilcannia crossing in New South Wales is little more than a string of stagnant pools. The largest of the storage dams at Menindee near the Darling has not held water since 2001. Consequently, the health of these rivers, and of the aquatic ecosystems they support, has been declining. Such a decline not only affects agriculture, but also lessens the value of the services these ecosystems provide, such as clean water for towns, habitat for flora and fauna, recreation and opportunities for tourism.

The Council of Australian Governments has agreed on a National Water Initiative to try and remove some of the impediments to better management of the nation's water resources, and a National Water Commission has been established in Canberra. But progress in resolving water problems, especially the one of creating an efficient national water market, has been slow, largely because water has always been a highly political issue and no Australian government has taken a long term view. The question is – will drought and climate change overtake us so that policy makers are left with even fewer options for solving the problems than they have now?

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A use for junk science

During my time as editor-in-chief of our illustrious *European Journal of Soil Science* I accepted for publication only about one third of the papers I received. That left two thirds, or more than 100 articles each year, that my referees and I deemed unfit for publication, at least in our Journal. More than 100 articles, in triplicate, and each typically of around 30 pages of double-spaced script; that is a lot of paper. Have you ever wondered what I did with it all?

I could have sent some of the articles on to the *Journal of Irreproducible Results*, especially ones based on simulations, but I didn't. I might have nominated one or two each year for the Ignobel Prize, but I judged them neither ludicrously funny enough nor sufficiently thought-provoking to qualify, and so I did not dispose of any by that route.

Instead I buried the lot in my garden. I added a bit of kitchen waste and the odd corpse (squirrel or cat, not disappointed author) to hasten decomposition, and in that way I reckoned that the papers should at least improve the soil (Dyspeptic Subvert) even if they did not improve our understanding of it.

Being of inquiring mind, I dug into the stuff from time to time. After a couple of years I found a soggy mass and home to a host of lively red worms. What would the fishermen of England give for them? Or should I let my neighbours' chickens in for a feast? No joy there; my suburban neighbours haven't cottoned on to the Good life. So the paper remained in place for another two years by which time it had become a fluffy compost, ideal for potting. I dreamed of an industry that would enrich any scientific editor and of the Luddite stance I should take against the electronic office.

Last year, in the spring, however, something new and quite unexpected happened. While the grass and weeds were still trying to decide whether it was time to put out their new growth fungi stole a march on them---and not just any old fungi, but morels (*Morchella vulgaris*), `edible and good' according to my guide book. For the best part of a month I would nip out of my back door to gather nature's bounty for breakfast. There were delectable luxuries for which you would pay an arm and a leg at Fortnum and Mason's.

So, dear readers, keep sending your papers to the editor-in-chief, however bad they are. And if they are truly execrable then label them 'Compost only' so that he does not have to

read them before consigning them to the scrap heap; you will have the satisfaction of knowing that your junk science has contributed to human happiness.
`*Buurrpp*'; excuse me!

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In Memoriam

Soil Science and Conservation Research Institute Societas pedologica slovaca announces with the deepest grief that on the 9th of June, 2005

Ing. Pavel Jambor, CSc.

our beloved long-term colleague, the president of Societas pedologica slovaca and our friend passed away peacefully from this world. By his passing, we are loosing the outstanding scientist, who considerably contributed to the soil science and land management development in Slovakia. He was for the long-time period president of SPS and the member of numerous significant scientific committees and societies at home and abroad. Honour to his memory! Funeral services was held on the 13th of June, 2005 in Pezinok.

Prof. J. Tinsley

The following is extracted from the obituary prepared by colleagues and published in the "Daily Telegraph". Professor Joseph Tinsley - Soil scientist who investigated soil organic matter and trained overseas students to work in their native countries

Joseph Tinsley who has died aged 88 after a long illness devoted much of his time during his twenty year tenure of the headship of the small Soil Science Department of the University of Aberdeen to recruiting and training post graduate students from the developing world - Africa, the Indian sub-continent, the Middle and Far East and South America. Many students so trained were equipped to return to their native countries to take appointments in which they could work on problems of food production. To this end Tinsley developed a two-year MSc in Soil Science which comprised a year's taught course followed by a laboratory based research project that often included fieldwork as well. It was a course that, over the years, attracted a number of post graduate students from within the United Kingdom some of whom went to posts in the developing world. Even many prospective PhD students began with the MSc course and were then upgraded.

Tinsley's concern for this overseas students went beyond their work in the department. The new students arrived either at the station by the early morning overnight train or by plane at Aberdeen airport. It was a surprise to them to be met by the head of department. Often students from tropical countries arriving in thin shirts and jackets were unaware of what the wind from the North Sea could be like even in October. Tinsley seeing them shivering on the airport tarmac drove them in his familiar minibus to his home. Here he raided his wardrobe to provide them with pullovers, anoraks and even warm underclothes. Then Tinsley, or his wife, would go to the shops later to buy more.

Joseph Tinsley who came from a farming family was born on 24th July 1916 at Greenhill Common Farm, Wootton Bassett, Wiltshire. He was awarded a bursary from his Sixth Form College to Bristol University in 1934 to read physics and chemistry. He recalled walking from Wills' Hall across the Down in the early morning to the university and taking the tram back in the afternoon "for one or two old pennies". After the first year Tinsley transferred to Reading in order to combine chemistry with basic geology and agricultural

science graduating in 1938 with first class honours. On the outbreak of war his work in the agricultural advisory service was declared a reserved occupation and Tinsley spent most of the war years as a chemist based at Wye College monitoring soil fertility levels in Kent, Surrey and Sussex. After 18 years of agricultural depression the content of soil nutrients had declined badly and it was vital that fertilizer from imported raw materials of phosphorus and potassium was rationed to best advantage.

After the war Tinsley returned to Reading University and to its highly regarded Soil Science Department. Here Tinsley was awarded a PhD for studies on the challenging complex problem of the chemical structure of soil organic matter. As a member of staff of this department Tinsley continued his studies in this field and a number of research students worked with him on "the great unanswered question". Among those was John Parsons who later succeeded Tinsley to the Chair at Aberdeen. It was to Aberdeen that Tinsley went in 1960 to the post of Reader and Head of Department where he began his recruitment of overseas students and continued his research on soil organic matter in respect of agricultural manures including the safe use of poultry manure. The department, however, was small in the number of undergraduate and postgraduate students and there were only three or four other academic staff. It suffered from being under-funded and lacked the up-to-date analytical instruments of the time. However, in 1969 the department received full recognition and Tinsley was appointed to a well deserved Chair. He was able to recruit a number of able postgraduates who made valuable contributions to soil science and the department expanded to an academic staff of ten. Yet Tinsley, a caring man, did not allow his researches or desire for academic success to affect his concern for the work and personal welfare of his students or indeed for his young staff who felt as if they belonged to a family.

Tinsley retired in 1981 and stayed in his adopted and much loved city. It was a disappointment to him that government cuts in the 1980s caused a reduction in the department. He was very proud of his students and kept copies of their theses in his study. He followed with much interest their careers particularly those from overseas many of whom kept in touch. His Christian faith and high personal standards shone through all he did.

Dr Harry Vine

Harry Vine. Born 11 September 1916. Died 11 April 2004. Survived by children, grandchildren, and a great grandchild.

Harry Vine was best known in soil science in Nigeria and in Trinidad and Tobago. He came to Trinidad (Imperial College of Tropical Agriculture, ICTA) in approximately 1938 with a PhD in chemistry. In Trinidad he studied soil science under Professor Hardy. In 1940 he was sent under the war effort to Nigeria, initially to look for alternatives to the malaria medicine quinine, of which supplies from South-East Asia had been cut off.

He moved on to investigating, identifying, and mapping soils of Nigeria. A paper quoted frequently up to today was published in 1953, in which he analyzed results of a long-term (1922-1951) experiment: 'Experiments on the maintenance of soil fertility at Ibadan, Nigeria'.

There followed what he regarded as his greatest piece of work--leading the soil survey of the cocoa belt of Western Nigeria. The idea was, he said, that every agricultural officer in the region would constantly refer to the survey report for pertinent information.

Harry Vine then worked as a Reader in Soil Science at ICTA in Trinidad, 1956-1961; and as a Lecturer--rising to Associate Professor--in the Department of Agricultural Chemistry and Soil Science at the University of Ibadan in Nigeria, 1961-1965. He supervised the first PhD in Agriculture of the University of Ibadan. During this time he wrote the Tropical Soils chapter for Webster and Wilson's textbook, Agriculture in the Tropics.

The rest of his career until retirement was at the Department of Geography, University of Leicester, UK. However, after retirement he went on to publish on a topic which had intrigued him for decades: whether high amounts of clay in topsoils of southern Nigeria could be attributed to fine dust blown from the Sahara over the previous 6 million years. The evidence, from soil profiles he had sampled over his career and analyzed after

retirement, was rather convincing. Two of his grandsons (now resident in Trinidad) will long remember driving around Nigeria in 1980 with him, observing and collecting more samples. In 1997 he was still making scanning electron micrographs of Nigerian samples in furtherance of theories of soil formation--work which is still to be published.
Harry Vine was an example of thoroughness in science--some might say he was over-cautious in coming to conclusions. He admitted to an unusual knack for analyzing landforms in the field. He was scientifically sharp right up to the last moment, 11 April 2004.
Harry Vine, 87, no doubt influenced lots of people--colleagues, students, agricultural scientists, family, and friends, in several parts of the world. As a son, I know his advice was excellent and well thought out.
Harry Vine had a strong social conscience. Suffice it to say that he ensured the African National Congress song, Nkosi Sikelele Africa, was played at his wife's (my mother's) memorial ceremony to recognize her joy, and his, at the release of Nelson Mandela from prison. The song was also played at Harry Vine's memorial ceremony in England, on 17 April 2004.

Peter Vine
Trinidad

Dr. Anna Ivanovna Romashkevich

Dr.Sc, a world-known specialist in soil micromorphology passed on May 24, 2005 (at the age of 79). Anna Romashkevich was a graduate of the Timiriazev Agricultural Academy in Moscow, where her scientific studies as student were concentrated on the stationary lysimeters arranged by Prof. Williams. Later on, being in the staff of the Dokuchaev Soil Institute she became interested in micromorphology and mineralogy; her highly respected teacher was Iraida Feofarova who pertained to the first generation of Academician B.B. Polynov's school.

Among the early publications of A. Romashkevich was a paper on the micromorphological indications of soil erosion - the first in this area, which, unfortunately, is mostly beyond the scope of micromorphology.
In 1956, she defended her Ph.D. thesis entitled " Soils of the Krasnodar kray", where micromorphology already served as an important tool to reveal the genesis of brown forest soils and identify their variants.
When by I.P. Gerasimov organized the Laboratory of Soil Genesis in the Institute of Geography (Ac.Sc. USSR) in 1961, A.R. was among its first and very active members, and she worked there until her retirement. As micromorphologist, she substantiated the studies of Gerasimov on soils of humid (sub)tropical regions, and published her second book on soils and weathering crusts in Western Georgia in 1974.
In the same time, she was the 'conceptual' leader of Russian micromorphologists in the period (late 60-ies - 70-ies) when new ideas and approaches of Kubiena and Brewer reached the Russian 'soil', namely, a rich factual background ('database') and traditions. They were very actively discussed: assimilated, rejected, modified. She was among the most creative authors of the National Guide to micromorphological description of soils and terminology (1979), and together with T.Tursina and M.Gerasimova participated in preparing a contribution to the well-known International Handbook of 1985.
A broad experience in micromorphology of diverse soils and her personal genetic-geographic mentality, as well as the ideology of the Laboratory she worked, were the reasons to write her third book "Micromorhology and Soil Formation" (1982, with M.

Gerasimova), which is oriented on the diagnostics of pedogenetic processes in thin sections. In the 90-ies, she drastically changed the sphere of her interests and addresses to mountainous landscapes and geomorphology.
Unfortunately, because of political restrictions in the USSR, Anna Romashkevich had few chances to contact her foreign colleagues: she was among the most popular persons during Wroclaw (1969) and Moscow (1974) International Meetings on Soil Micromorphology. Last year in Adana (Turkey), during the 12th meeting, Ahmed Mermut in his Opening speech said many warm words about her, and people of that generation who knew and highly respected her will transfer to the younger ones her scientific ideas and her image of an extremely honest scientist and charming lady.

Reports of Meetings

Earth Day Celebration In Albania

On April 22, 2005 The Albanian soil Science Association, soil science Institute in collaboration with the Ministry of Environment, Ministry of Agriculture and Food, organized a massive activity dedicated to the Earth Day with participation of scientist i soil science Institute, member of Albanian soil science Association, representatives from various Ministries and international organizations, Agriculture university, local government, research institutes, etc.
In the activity participated Minister of Agriculture and food Mr. Agron Duka, chairman of Albanian science Academy Prof. Ylli Popa, Deputy Minister of Environment Mrs. Etleva Canaj, Deputy Minister of Agriculture Mrs. Vjollca Ibro, members of Albanian parliament etc.
The President of Albanian soil science Association and at the same time Director of soil science Institute Prof. Dr. Sherif Lushaj, evoked the history of this day and the responsibilities deriving in the current conditions that Albania has less land.
The overall country's territory of 2874800 ha, includes 699500 ha (24,4 %), 1062770 ha (36.9 %), 414517 ha pastures and meandrous (14.4 %) and 699013 ha (24.3%) for other uses. The agricultural land surface per person is about 0.21 ha. Albania is a mountainous country and only 16 % of the territory is located at elevations of less than 100 m above the sea level. The average elevation (altitude) level in Albania is about 708m, or with elevation above the sea level ranging from 0-2750 m. the high mountain of Albania is with elevation above the sea level ranging from 0-2750 m. The high mountain of Albania is with elevation 2751 m. Annual rainfall level is 1000-2000 mm./year. Agriculture land according to the relief is divided as fellow: field area 43 % (slope till 5 %) and hilly and mountain 57 % (slope more than 5 %).
In these conditions, soil erosion and pollution are problem and has been the focus of the research conducted by various institutions. The major controlling soil erosion factors in Albania area: total rainfall that varies between 900-1800 mm/year. Lack of vegetation cover and rapid increase of bare areas especially in steeper soil. More than half of the territory has slope 25 % and greater. Average altitude is 708 m and only 16 % of the territory is located at elevations of less than 100 m above the sea level. There are seven rivers crossing the western coastal areas flowing to the Adriatic sea. Soil loss studies using watershed sediment assessment methods indicate that the river network transports i a year about 60 million tons of fie and coarse sediment, 1.2 million tons of organic materials, 170 thousand tons N, P.K. salts. The rivers often flood the lower parts affecting around 40.000 ha each year. Deforestation and overgrazing during the transitional period has further aggravated the situation. Lack of apptopriate investment for soil conservation measures has also contributed to this problem. We have some of the erosion forms taking place in Albania: Land slide, river bank erosion, coastal erosion, gully erosion. The coastal erosion has been characterized by increased sediment deposits at the river mouth and eroding beaches further away from the river mouth which has lead to

changes in coastal lines. About 45000 ha agriculture land in the oil-rich areas, are found to have concentrations of NI.

Annual soil losses fluctuate from 10 – 40 ton/ha according to area. Wherefore, implementation of mass per erosion protection, flooding, deforestation etc., are principal.

In this activity were presented posters from 12 Main Ministry and institutions that deal with land problems in Albania and distributed books and brochures related to land management.

Minister of Agriculture and Food Mr. Agron Duka evidenced work of Ministry of Agriculture and Food for preparation of law about land administration and protection and addressed to the participation and requested from the government organs and research institutions to follow the priorities for land protection and land use, to intensify the scientific studies and make aware the community of these important resources. He presented the strategy of Ministry of Agriculture and Food for the land. In the end, participants accepted a program for coordination of activities on land.

Deputy Minister of Environment Etleva Canaj, introduced environment situation on environment monitoring, soil and water pollution as well as pesticides pollution. In particular, the work and the plans of this Ministry to fulfill the duty of United Nation convent were introduced.

Prof. Dr. Ylli Popa, Chairman of Albania Science Academy, presented the way of collaboration with all actors and responsible structure to land administration, land protection and environment.

Many participants (representative of society and state structure) proposed legal improvement, institutional collaboration and the media to be more active in treatment of problems related to land protection and environment.

In this activity, the National Plan on land protection presented, because is worked in last two years from Soil Science Institute, Albanian Soil Science Association and Forest Research Institute, with support of Ministry of Agriculture and Food and Ministry of Environment. The plan will be approved from decision maker's organs.

This day serve for opinion sensibility and state structure to land protection and environment.

Prof. Dr. Sherif Lushaj
President of Albania Soil Science Association
Director of Soil Science Institute

International Symposium on Soil and Plant Analysis, Mexico

The 9th International Symposium on Soil and Plant Analysis (ISSPA) was held at the Hyatt Regency Hotel in Cancun, Mexico, January 30-February 4, 2004 (Theme: "Soil, Plant, and Water Analysis: Quality Analytical Tools for an Era of Ecological Awareness"). It was organized by the Soil and Plant Analysis Council, Colegio de Postgraduados, and the Mexican Soil Science Society. This is the first time that this event was held in Mexico. It continued a successful series of symposia held biennially since 1989. The purpose of the symposium was to bring together agricultural and natural resource scientists from around the world to disseminate information on methodology, terminology, interpretation and application of soil, plant, and water analyses for the purpose of efficient resource management, sustainable production, and environmental protection. A 168-page Program and Abstracts book was given to all the registrants at the beginning of the symposium. The Welcome Reception on January 31 was a unique opportunity to renew old friendships and make some new ones. The symposium was officially opened by Mark Flock, President, Soil and Plant Analysis Council, on February 1. The program included tours, training workshops, instrument expo, and plenary and poster sessions. A number of highly regarded keynote speakers from six continents presented oral papers in the plenary sessions. Poster presentations were an integral component of the symposium. The oral and poster papers will be published in a proceedings as a special issue of the *Communications in Soil Science and Plant Analysis* after a scientific review (Neil Christensen, editor). Malcolm Sumner, an internationally acclaimed soil scientist from Athens, Georgia, USA,

received the prestigious J. Benton Jones, Jr. Award for his significant contributions in the development and advancement of soil testing and plant analysis. The pre-symposium tour on January 29 included a trip to the Xcaret Park: Eight archaeological sites and ruins, museum, orchid farm, wild bird aviary, coral reef aquarium, caverns, papantla flyers, Mayan village, folkloric Mexican shows, native bees, tropical jungle path (botanical garden), 630-m underground river, etc. The mid-symposium tour on February 2 to Tulum and Chichén Itzá gave an opportunity to view the soils, agriculture and forests of the Yucatan Peninsula. The Local Organizing Committee included Jorge Etchevers (Chair) and Claudia Hidalgo Moreno. Other members of the Symposium Organizing Committee were Edna Alvarez (Mexico), Bob Beck (USA), Andries Claassens (South Africa), Peter Csatho (Hungary), Bob Deutsch (USA), Mark Flock (USA), Roger Hill (New Zealand), Yash Kalra (Canada), Robert Miller (USA), George Rayment (Australia), John Ryan (Syria), Byron Vaughan (USA), and Arri van Vuuren (South Africa). Anette Palm (Germany) was the symposium manager. The 10th International Symposium on Soil and Plant Analysis will be held in Budapest, Hungary in 2007 (Tamas Nemeth, Chair, Local Organizing Committee). Further information will be posted on our web site (www.spcouncil.com).

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Indian Society of Soil Science Held its 69th Annual Convention at Hyderabad during October 27-30, 2004

The Indian Society of Soil Science (ISSS) held its 69th Annual Convention in the Auditorium of the Acharya NG Ranga Agricultural University (ANGRAU), Hyderabad during 27-30 October, 2004. In the inaugural session held on 27th October, 2004. Dr. G. Narayanasamy, President of the ISSS chaired the session. Mr. N. Raghuveera Reddy, Honorable Minister of Agriculture, Government of Andhra Pradesh, was the Chief Guest. Dr. JS Kanwar, DDG Emeritus, ICRISAT, Dr. JC Katyal DDG (Education) ICAR, Dr. JS Samra, DDG (NRM) ICAR, Dr. IV Subba Rao, Former Vice Chancellor of the ANGRAU, Mr A.K. Goel, In-charge Vice Chancellor of the ANGRAU, were the Guests of Honour. Several other distinguished dignitaries and guests, and nearly 320 Members of the ISSS graced the occasion. Dr. Narayanasamy welcomed the guests and briefly highlighted the glorious past of the Society, paid rich tributes to the members and the Council of ISSS, past and the present, for the significant achievements of the Society during the past 69 years. Dr. IV Subba Rao in his address emphasized on the need for a paradigm shift in research priorities by making soil science research capable of meeting the challenges posed by WTO regime. Dr JS Kanwar emphasized that future research agenda of Soil Scientists must remain focused on increasing productivity, increasing efficiencies of all inputs and imparting sustainability to the agricultural systems, and preventing and correcting soil-related constraints through integrated researches on soil, water and plant system for producing synergistic effect. The Chief Guest, Mr. Raghuveera Reddy stressed on the need of having problem-solving and mission-oriented research programmes. He emphasized on the need of following holistic approach in tackling these gigantic problems through inter-institutional cooperation and collaborations.

During the inaugural function, the Fellowship of ISSS was conferred on i) Dr. R. Krishnasamy, Dean, Tamil Nadu Agricultural University, Coimbatore; ii) Dr. A.K. Sarkar, University Chairman and Head, Department of Soil Science and Agricultural Chemistry, Birsa Agricultural University, Ranchi; iii) Dr. A Sreenivasa Raju, Head, Department of Soil Science and Agricultural Chemistry, ANGRAU; Hyderabad; and iv) Dr A Subba Rao, Director, Indian Institute of Soil Science, Bhopal. Dr. Biswapati Mandal, Professor, Department of Agricultural Chemistry and Soil Science, Bidhan Chandra Krishi Viswavidyalaya Mohanpur was awarded the 12th International Congress Commemoration Award. Dr. Tapan Adhikari, Scientist, Indian Institute of Soil Science, Bhopal was awarded the Golden Jubilee Commemoration Young Scientist Award. The function came to a close with a formal vote of thanks by Dr B. Sreemannarayana, Organizing Secretary, 69th Annual Convention of the ISSS and Principal Scientist, ANGRAU, Hyderabad.

During this Convention the usual two special lectures were organized. The 22st Prof. J.N. Mukherjee - ISSS Foundation Lecture was delivered by Dr. K. Sridhar, Professor, Department of Crop and Soil Sciences, Pennsylvania State University, University Park, PA 16802, USA on the topic 'Synthetic and modified clays for environmental clean up: Soil and water' on 27th October, 2004. The 31st Dr. R.V. Tamhane Memorial Lecture was delivered by Dr. P.D. Sharma, Assistant Director General (Soils), ICAR, New Delhi on 28th October, 2004 on the topic "Managing Natural Resources in India Himalayas"

Half-a-day Brain Storming Session on "Shrinking Job Opportunities in the field of Soil Science" was arranged on 28th October, 2004. Dr I.V. Subba Rao, Former Vice Chancellor of the ANGRAU and Dr. D.K. Das, Past President, Indian Society of Soil Science conducted this Session as Chairman and Co-Chairman, respectively. Panelists included Dr. J.C. Katyal, DDG (Education) ICAR; Dr. J.S. Samra, DDG (NRM) ICAR; Shri M.K. Miglani, Vice Chancellor, CCS Haryana Agricultural University, Hisar; Dr, P. Venkateswarlu, Managing Director Nagarjuna Fertilisers and Chemicals Limited; and Dr. SS Khanna, Former President ISSS. Structured presentations were followed by open-house discussion. After an in-depth analysis on the different aspects of the problems with possible solutions thereof, the house unanimously recommended the constitution of a Committee by the Council of the Society to prepare a policy paper on the theme and subsequently submit the paper to the Union Government and other concerned quarters. The session came to a close with a vote of thanks by Dr. R.K. Rattan, Secretary, ISSS.

A National Seminar on 'Developments in Soil Science - 2004' was organized, in which a total of 19 papers in oral and 279 papers in poster sessions were presented on 27th, 28th and 29th October, 2004. The 69th Annual General Body Meeting of ISSS was held on 28th October, 2004. Dr. G. Narayanasamy, President of the ISSS conducted the meeting attended by 135 members of the Society. The business of the meeting as per the listed agenda, was transacted. During the convention, a cultural evening was organized on 27th October, 2004 in which classical/ semi-classical items, dances, songs, *etc.*, which were enjoyed by the participants.

The concluding session was held on 29th October, 2004. Dr. (Ms.) B. Venkata Ratnam, ANGRAU, Hyderabad was awarded the ISSS Best Doctoral Research Presentation Award for the year 2004, while the other contestants, namely, Dr Rajeev Sikka, PAU, Ludhiana and Dr. Ms. A. Renukadevi, GKVK, Bangalore were given Commendation Certificates. A review of the Brain Storming Session as well as the National Seminar was made. Members were invited to offer their comments on the several activities carried out during the preceding two days. Members made many useful suggestions. Dr. G. Narayanasamy, delivered the Presidential Address, in which, he stressed on establishment of a confederation of Professional Societies/ Groups functioning in the realm of soil and land for the sake of re-establishing our relevance to the community and also economic viability. He made a passionate appeal to the members of the ISSS to "think global and act local" for the prosperity of both Soil Science as well as the Soil Scientists.

A field-cum-sight-seeing trip was organized on 30th October 30, 2004 in and around Hyderabad city for discovering the diversity in rocks and soils in the area, often called as the "Soils museum".

International Conference in Prague 22th to 24th June 2005
The Role of Long-term Field Experiments

The Research Institute of Crop Production Prague organized in collaboration with theMinistry of Agriculture Czech Republic, Czech University of Agriculture Prague, Mendel University of Agriculture and Forestry Brno, Agricultural Research Institute Kromeriz, Ltd, Martin-Luther –Universität Halle-Wittenberg (Germany), UFZ – Centre for Environmental Research, Leipzig – Halle (Germany), International Working Group of Soil Fertility in the IUSS an International conference on The Role of Long-term Field Experiments in Agricultural and Ecological Sciences together with Practical Solutions for Managing Optimum C and N Content Agricultural Soils III On the occasion of the 50 th anniversary of the long-term field experiments in the Czech Republic.

On this conference 100 scientists from 14 different countries participated. Altogether 39 lectures were held and shown 46 poster.

The main topics of the conference were:

- Long-term field experiments, crop yields and yield stability
- Dynamics of the soil organic matter, possibilities to optimize the soil organic matter content in agricultural soils
- Long-term field experiments, nutrient balances, nutrient cycles
- Methods for determination of the decomposable part of SOM
- Evaluation of the productivity and sustainability of agricultural systems
- Assessment of soil quality and fertility

Meeting place was the Czech University of Agriculture in Prague Suchdol. The conference was excellent organized by the Czech colleagues and their co-workers. Many thanks from all the visitors of the conference particular to Jan Lipavsk_, who chaired the conference and Jaromír Kubát, who guided through the field trials. During a half day excursion the experimental field in Prague-Ruzyne was visited. The excursion on the last day of the conference led to South Bohemia. It was dedicated to the inspection of the research station Humpolec, the Monastery Zeliv and the Gothic castle Cesky Sternberk. The conference showed again that Prague is a most exiting place in many respects, so also cultural and scientific.

In the lectures and discussions during the conference the meaning of long-term field experiments for soil science and environmental research was emphasized. Many problems

that have not been sufficiently clarified yet can be only solved by using long-term field experiments. In this connection the clearing-up of the questions of the supply of soils with organic matter and the elaboration of suitable methods to determine optimal humus contents has a special meaning, not only for the agriculture, but in particular for the environment.

Dr. Kubát explaining the long-term field trial at Prague-Ruzyne

Thus many contributions were concerned with the evaluation of long-term field experiments regarding this emphasis. The meeting row "Practical Solutions.....", in this year one part of the conference constituted, concerns themselves with priority with this range of topics. The first meeting took place 2001 in Prague. The next conference "Practical Solutions.....IV" is regular organized in June 2007 again in Prague Ruzyne. The experiences of the past years showed an increasing interest in this conference. This is on the one hand because of the urgency of the topic and the necessity to compile solutions for practice, on the other hand Prague Ruzyne as meeting place offers best conditions for a creative work and the city Prague is an ideal surrounding field for such meetings.
It is a great deficiency, that optimal values for all macro- and micronutrients in the soil are well-known, also limit values for pollutants, and this since many decades, but optimal values for the most important elements, carbon and nitrogen, are more or less missing up to now. Thus these tasks will have a great importance also in the future, not least because the problem cannot be solved without long-term experiments.

Martin Körschens, University Halle
Wolfgang Burghardt, University Duisburg-Essen
Germany

GLOBAL SOIL CHANGE: Time-Scales and Rates of Pedogenic Processes, Mexico City, March 10-18, 2005

This meeting was organized by two Commissions 1.3, Soil Genesis and Commission 1.5, Paleopedology together with La Sociedad Mexicana de la Ciencia del Suelo, Instituto de Geología, Universidad Nacional Autónoma de Mexico (UNAM), Colegio de Postgraduados, Montecillo, Mexico, and Institut de Recherche pour le Dévelopement (IRD), in France. It was well attended by the international and Mexican participants of about 60 scientists from 13 countries (Argentina 2, Canada 1, Cuba 1, China 1, Germany 11, Hungary 1, Italy 4, Rumania 1, Russia 6, Spain 1, Taiwan 3, USA 6, Mexico 22). The objective of the meeting was to increase our understanding of the pedosphere. It was recognized that the pedosphere and biosphere accelerating changes rapidly require more in depth understanding from the Earth and Life sciences stand point of view. This is the reason why this International IUSS Conference was held in Mexico. The Conference focused attention on time scales and rates of both natural and humanly induced pedogenic processes in relation to the global soil change.
Scientific sessions included were:

1. Main concepts of soil systems behavior in time.
2. Chronosequences of soils and paleosols: time-scales for natural pedogenic processes.
3. Rates and characteristic times for modern and ancient human induced pedogenic processes.

4. Time scales of soil – geoforms – biota interactions
5. Experimental modeling of pedogenic processes.
6. Soil dating methods: advances and limitations.
In a final session, a round-table discussion will examine the question:
"What are the important gaps in our knowledge on soil and time problem?"
The Conference had a three-day program of oral and poster sessions and two (pre and post) conference tours. Organizers have done a superb job.

Four day pre-conference field excursion
The Nevado de Toluca paleosol sequence was visited, with ages covering the last 50,000 years, formed from pyroclastic materials. During this excursion the soil diversity and landscape evolution in a typical mountain landscape at the western portion of the Transmexican Volcanic Belt (Michoacán state) and soils develop on a wide range of volcanic rocks from Tertiary dacites to Quaternary basalts and alluvium were examined. Participants enjoyed the area of the Paricutin volcano, that erupted in 1943. Soil chronosequences in this volcanic field and their relation to site quality for forest management were evaluated. Finally, they looked at soil erosion on lower slopes and piedmonts of volcanic mountains and its implications for surface water quality in the Cointzio watershed near Morelia, Michoacán. This excursion had 21 participants.

Two days post-conference field excursion:
The participants have visited the area of Texcoco ex-lake, from the slopes of the Sierra Nevada to study the soil topo-chrono-climo-sequence on volcanic and lacustrine sediments, bearing effects of human impact of different age and duration (prehispanic, colonial, and contemporary). This excursion was plenty of cultural aspects, including the archaeological site in Huexotla and a Franciscan convent built in the XVI century. The participants enjoyed the paintings of Diego Rivera in the School of Agronomy (Universidad Autónoma de Chapingo); and finally the 28 participants enjoyed the famous archaeological site of Teotihuacan.The following individuals should receive special thanks for the excellent work and dedication for making the meeting a great success: Christina Siebe, Lorenzo Vázquez, Carmen Gutiérrez, Sergey Sedov, Jorge Gama, Maricela Coronado, Guadalupe Maturano

Elizabeth Solleiro-Rebolledo
Victor Targulian
Ahmet R. Mermut

International Conference on Soil, Water and Environmental Quality — Issues and strategies held during January 28 – February 1, 2005, New Delhi

The International Conference on Soil, Water and Environmental Quality – Issues and strategies, held during January 28-February 1, 2005 was organized by the Indian Society of Soil Science (ISSS). It was attended by 450 plus delegates from India and 28 foreign delegates representing 17 countries. At the inaugural function on January 28, 2005, Mr. Montek Singh Ahluwalia, Deputy Chairman, Planning Commission, Government of India, was the Chief Guest. Guests of Honour were Dr. Mangala Rai, Secretary DARE & DG (ICAR); Dr.. J.S. Samra, DDG (NRM), Chairman of the Organizing Committee and President of the ISSS; Prof. S. Nortcliff, Secretary General, IUSS; and Dr. S Nagarajan, Director, IARI. In his inaugural address, Mr. Ahluwalia emphasized that solutions to the problems of soil, water and environmental quality were complex because of mounting demographic pressure, emerging global and national environmental challenges, developments in scientific knowledge not able to keep pace with newer problems, policies not commensurate with ground realities, weaknesses in the legal system and multiplicity of agencies handling the same problem, etc. He expressed optimism and exhorted the delegates to develop holistic solution to this complex problem.
Fifteen ICAR Institutes and four private partners displayed various exhibits besides the Natural Resource Management (NRM) Division of the ICAR. This material was very effective in explaining extreme weather events like drought, floods, cold/heat waves, super- cyclone and recent Tsunami disaster. Displays on mangroves, shelterbelts, salinity-tolerant varieties, crops, and trees facilitated discussion on the post-Tsunami and future management strategies. In all 39 oral presentations covering two plenary lectures, two evening lectures, five symposia sessions were made. Two hundred eighty-one poster presentations were made spread over three sessions. Three posters were selected for the Best Poster Presentation Award. The publications brought out on the occasion of the Conference included: i) Souvenir; ii) List of abstracts of papers for presentation; and iii) Abstracts of voluntary and invited papers. Printing of full length papers and late received abstracts is being planned and will be completed shortly.
The Conference was built around invited lectures, plenary lectures and poster papers. It technically comprised five symposia focusing on quantitative indices for soil and water quality, agricultural management practices, climate change, social impacts and strategies for sustaining resources quality.
Plenary session held on February 1, 2005 was chaired by Prof. M.S. Swaminathan, Chairman, National Commission on Farmers. In his plenary address Dr. M.S. Swaminathan, Chairman, National Commission on Farmers, Government of India mentioned, that the total productivity and factor productivity in India is low largely because we are not able to attend to this living industry (agriculture) as we are probably

attending to the dead industry like share markets and so on. Quoting extensively from the report "Serving farmers and saving farming" submitted by the Commission to the Government of India, Dr. Swaminathan laid emphsis on development of Soil Testing network capable of monitoring soil, water and environmental quality; starting of renovation of the wells under million wells scheme; and expansion of integrated watershed management etc. Prof. S Nortcliff, Secretary General, IUSS expressed on the need of pressing for holding "UN Soils Convention" to accord the same high priority to soil preservation as was being currently given to climate change, biodiversity, etc.

Recommendations emanating from the Conference are:

1. Soil, water and biodiversity are our national wealth and heritage. Majority of our resources have been over-exploited and are in an advanced stage of degradation due to loss of organic matter, depletion of nutrients, over-exploitation of ground water and depletion of carrying capacity of pastures, grazing land and other open access or common property resources.
2. Total and partial factor productivity in agriculture has declined and even become negative in the Indo-Gangetic plains and other agro-ecologies. Enhancing input use efficiency for cost competitiveness and reducing pollution possibilities is urgent.
3. Enhancing water productivity by integrated management of its multiple use cycling/ recycling and farming systems is the highest priority of maximizing returns per drop of water.
4. About 80% of world agriculture is already rainfed and 50% of Indian agriculture is likely to be rain-dependent even after having developed all water resources. Improving productivity in rainfed agro-ecologies through participatory integrated watershed management needs immediate scaling up.
5. A comprehensive diversification in terms of varieties, crops, farming systems, inputs, agricultural practices and marketing strategies is necessary to meet emerging challenges of WTO and other conventions or protocols.
6. Soil organic matter (SOM) is the mainstay of soil quality. While balanced fertilization may meet crop productivity and maintain SOM, it is an urgent imperative to improve the sequestration of carbon in all the soils by all available means including recycling of crop residues, green-manuring, composting, reduced tillage etc. We must

realize that the "grains belong to humans but the residues belong to the soil". So carbon sequestration should be an urgent priority, irrespective of its effect on climate change. Enhanced use of bio-fertilizers, soil microbes, bio-pesticides and bio-control of weeds may be given high priority.

7. Increasing urbanization and industrialization will generate large quantities of solid wastes and effluents beyond the capacity of natural systems to assimilate. This is posing severe health hazards due to load of heavy metals, detergent, pharmaceutical compounds and pathogens. Some of the water aquifers are likely to be contaminated with nitrates, fluorides, agro-chemical residues, selenium and arsenic triggered by geogenic (natural) and anthropogenic processes. While the search for cost-effective chemical and bioremediation options are on, refinement of agronomic options is called upon. River water quality monitoring showed that more than 90% of the contamination was due to point-source of urban and industrial effluents. Pre-treatment of effluents to meet the criteria for discharge into rivers and canals is necessary. Adoption of "polluter must pay" principle needs to be strictly adopted.

8. Productivity of wastelands may be restored with inputs of social capital for removing poverty by enhancing self-employment, income generation and livelihood opportunities for small/marginal farmers and landless communities.

9. Enabling reforms, regulations, contracting and leasing systems of land, water and machinery require legislative initiatives.

10. The shrinking capacity of soils to absorb any more abuse must be impressed on the public mind through appropriate changes in educational curriculum, through the mass media and it is time for individual countries to act on the "World Soil Charter of FAO" and press for "UN Soils Convention" to accord the same high priority to soil preservation as is being currently given to climate change, biodiversity etc.

Annual meeting of the Austrian Soil Science Society in co-operation with the Slovenian Soil Science Society in Ljubljana/Slovenia, 12-13 May 2005

The annual meeting of the Austrian Soil Science Society was, for the first time, held outside Austria, in Ljubljana/Slovenia. The reason for that was the activity of the comission Sub-Illyricum, which was founded during the 50th anniversary meeting of the ASSS in 2004. This commission was organized to promote the co-operation with Slovenian soil scientists, which - at this time - had no national soil science society. During the present meeting we already could celebrate the newly founded Slovenian Soil Science Society under its first president, Dr. Toma_ Pruz. The ASSS is grateful for the orgaization of the annual meeting at the Slovenian Forest Institute by Dr. Pruz, Dr. Primoz Simon_i_ and Prof. Niko Torelli, Head of the Institute, which was dedicated to "Soil indicators". Four invited speakers, Dr. Luca Montanarella/EBS Ispra (The alpine soil database), Dr. Armin Keller/FAL Reckenholz (Monitoring soil quality in the long term), Prof. Franc Lobnik/University of Ljubljana (Concepts for soil indicators) and Sigbert Huber/Federal Environment Agency, Vienna (The Austrian soil indicator set and its development) introduced into this topic, which is widely discussed on a national and international level today. The majority of the additional 10 volunteered oral presentations and 18 posters focussed on the same topic (with interesting examples from soil chemistry, biology and physics), which enabled an in-depth discussion of basic concepts and practical solution to the problem amongst the 60 participants from Austria, Slovenia, Italy, Switzerland and Poland. Even medieval soil indicators were reported by Verena Winiwarter, which focussed obviously on a more integrated picture of the soil conditions – an interesting concept also for the future? The short papers (6 pages, in English) of all contributions will be available in the next volume of the "Mitteilungen der Österreichischen Bodenkundlichen Gesellschaft" (see also our homepage, www.boku.ac.at/oebg). On the second day the participants could enjoy an excellent soil scientific excursion to western Slovenia, with examples of Histosols (Ljubljana Moor), Gleysols (Planinsko Polje), Cambisols and Chromic Cambisols under Austrian pine in the karst area. Many thanky to the Slovenian colleagues for this wonderful experience.

Martin H. Gerzabek
President, Austrian Soil Science Society

Participants of the symposium "soil indicators", organised by the Austrian and Slovenian Soil Science Societies.

Workshop of the Western Enviro-Agricultural Laboratory Association Edmonton, Canada

The 16th Annual Workshop of the Western Enviro-Agricultural Laboratory Association (WEALA) was held at the Alberta Research Council (ARC), Edmonton, Alberta, Canada, on April 14, 2005. The theme of the workshop was "Current water quality issues". Salim Abboud welcomed the delegates to the ARC. Curtis Olive, President, welcomed the participants on behalf of WEALA and chaired the Workshop sessions. At the previous 15 workshops, the attendees have been from Western Canada and the United States of America. At the 16th Annual Workshop, we were pleased to have Basilio Brizuela-Amador Perez, a visiting scientist from the Colegio de Postgraduados, Instituto de Recursos Naturales/Edafologia, Montecillos, Mexico.

The Workshop included following presentations: (1) Heavy oil extraction and groundwater quality (Jon Fennell, Komex International), (2) Toxic chemical identification in plant cooling water (Deib Birkholz, EnviroTest Labs), (3) Coal-bed methane development and groundwater quality (Nga de la Cruz, Alberta Environment), (4) Aspects of water quality and conservation related to tar sands extraction (Mike MacKinnon, Syncrude Canada), (5) Alternative water sources in drilling fluid formulation (Jason Desilets, EnCana Corp.), and ((6) Intensive livestock operations and surface water quality (Brent Paterson, Alberta Agriculture). There was a stimulating panel discussion following each presentation and during the panel discussion at the end of all presentations. The program committee is to be complimented for an excellent program.

The Association held its Annual Business Meeting following the Workshop. The results of a recently-conducted collaborative study were discussed. Curtis Olive (President), Doug Keyes (Vice President), and Joel Crumbaugh (Secretary/Treasurer) completed their terms on the 2004-2005 Executive. Curtis Olive and Joel Crumbaugh were re-elected. The

Executive for 2005-2006 consists of Curtis Olive (President), Trevor Sorensen (Vice President), and Joel Crumbaugh (Secretary/Treasure).

Yash P. Kalra, Past President WEALA
Canadian Forest Service
Edmonton, Alberta, Canada
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Upcoming Meetings

For details on the Upcoming Meetings see: www.iuss.org

2005

Advances of molecular modeling - Perspectives for soil research 21-22 Oct **Austria**
N management in agroecosystems 24-26 Oct **Netherlands**
Frontiers in exploration of the critical zone 24-26 Oct **USA**
ASA-CSSA-SSSA International annual meeting 6-10 Nov **USA**
Manage your soils and grow your business 15-16 Nov **UK**
Soils of urban, industrial, traffic, mining and military areas 17-25 Nov **Egypt**
Management of tropical sandy soils for sustainable agr. 28 Nov-2 Dec **Thailand**
Where water meets. NZ soils conference 28 Nov-2 Dec **New Zealand**
7th African Crop Science Society Conference 5-9 Dec **Uganda**
Efficient crop nutrition: challenges and prospects 14-16 Dec **UK**

2006

14th World fertilizer congress 22-27 Jan **Thailand**
11th Congress of soil science 13-16 March **Pakistan**
Conference on hydrology and management of forested wetlands 8-12 April **USA**
14th ISCO Conference 14-19 May **Morocco**
4th Latino-American congress on environmental physics & chemistry 22-26 May **Spain**
Long term studies in ecology 22-24 May **UK**
International symposium on deteriorated volcanic soils 1-8 July **Mexico**
2nd Global workshop on digital soil mapping 4-7 July **Brazil**
18th World Congress of Soil Science 9-15 July **USA**
100 years of soil science in Romania 20-26 August **Romania**
17th ISTRO Conference 28 August-3 September **Germany**
ASA-CSSA-SSSA International annual meeting 12-16 Nov **USA**

2007

ASA-CSSA-SSSA International annual meeting 4-8 Nov **USA**

2008

International congress of irrigation and drainage **Pakistan**
ASA-CSSA-SSSA International annual meeting 26-30 Oct **USA**

New Publications[1]

Phosphorus: Agriculture and the Environment. Agronomy Monograph No. 46. J.T. Sims and A.N. Sharpley, co-editors. American Society of Agronomy, Crop Science Society of America and Soil Science Society of America, Madison, 2005, xxiii + 1121 p. ISBN 0-89118-157-1. Hardcover.
This publication builds upon the scientific understanding of phosphorus (P) in agricultural settings presented in the 1980 ASA-CSSA-SSSA Monograph The Role of Phosphorus in Agriculture, edited by Khasawneh, Sample and Kamprath. In the 25 years that have passed, we have seen major advances in the understanding of how to best manage P for agricultural production, vitally important given the increased pressures agriculture faces to provide food for a rapidly growing world population. We have also seen growing concern about the impacts of agricultural P on our environment, particularly surface waters where accelerated euthrophication is now a worldwide environmental issue. Crop production in vast areas of the world is limited by P-deficient soils and new strategies are required to remove this limitation and provide an adequate food supply. In contrast, in many developed countries, we often find agricultural P surpluses that have led to the accumulation of P in soils, and to P losses in runoff and leaching which, in turn, degrade our surface waters, threatening habitats, fisheries, and even human health. The problem facing animal agriculture, often concentrated geographically in a manner that leads to large P surpluses on farms and in watersheds, is especially acute today. These challenges have led to a greater emphasis on the integration of multi-disciplinary science into agri-environmental policy, as we seek to increase agricultural productivity while protecting, or remediating, our water supplies. The present monograph provides a comprehensive, systematic review of the varied aspects of P use in crop and livestock production and of the relationships between agricultural P management and water quality. The book, which is well illustrated with figures and tables, presents a contemporary analysis of the forms and cycling of P in soils and the agricultural and environmental management practices used today to optimise crop production while preventing nonpoint P pollution of our surface ground waters. The book has the following sections: I. Phosphorus sources for agriculture: production and characteristics (2 papers); II. Phosphorus reactions and cycling in soils (8 papers); III. Phosphorus: plant nutrition and crop management (7 papers); IV. Phosphorus and animal nutrition ((4 papers); V. Agricultural management practices for phosphorus (6 papers); VI. Phosphorus and the environment (5 papers). All papers have extensive up-to-date lists of references.
Price: USD 155.00, plus 10% for orders to outside the United States.
Orders to: ASA-CSSA-SSSA Headquarters Office, Book Order Department, 677 South Segoe Road, Madison, WI 53711-1086, USA. Email: books@soils.org Internet: www.asa-cssa-sssa.org

Chemical Processes in Soils. Soil Science Society of America Book Series no. 8. M.A. Tabatabai and D.L. Sparks, co-editors. Soil Science Society of America, Madison, 2005, xix + 723 p. ISBN 0-89118-843-6. Hardcover.
This book provides and authoritative review of the principles governing some of the most important chemical reactions and behaviour in soils. It contains 15 chapters. Soil organic matter is one of the most complex and reactive fractions of soils. A major chapter on the chemistry of soil organic matter covers carbon in the environment, the genesis and fractionation of soil organic matter, isolation of humic substances, and considerations of their structural composition, soil saccharides, and soil peptides. The details of the reactions involved and the techniques and methods used are described. Other chapters explore in detail the chemistry of phosphorus, potassium sulphur and micronutrients in soils. Other important topics include the kinetics and mechanisms involved in biogeochemical

[1] The New Publication section is prepared by Hans van Baren (hans.vanbaren@wur.nl). Should you have a publication that you would like to have included in the next IUSS Bulletin, ask your publisher to send a review copy to: ISRIC-IUSS, PO Box 353, 6700 AJ Wageningen, The Netherlands.

processes, cation exchange reactions, soil acidity, chemistry of redox processes, equations and models describing adsorption processes, sorption and desorption rates of neutral organic compounds, metal complexation by soil humic substances, speciation of metal in soils, chemistry of speciation of trace elements in soil solution, and the chemistry of salt-affected soils. The chapters have many illustrative tables and figures, and have extensive lists of references.
Price: USD 90.00, plus 10% for orders to outside the United States.
Orders to: ASA-CSSA-SSSA Headquarters Office, Book Order Department 677, South Segoe Road, Madison, WI 53711-1086, USA. Email: books@soils.org Internet: www.asa-cssa-sssa.org

Principles of Soil and Plant Relations. M.B. Kirkham. Elsevier, Amsterdam, Boston, 2005, xvii + 500 p. ISBN 0-12-409751-0. Hardcover.
This textbook is developed from lectures for a graduate class in soil-plant-water relations. The book follows water as it moves through the soil-plant-atmosphere continuum, focusing on water in the soil and whole plant, combining soil physics, plant physiology, and microclimatology. The well-written text, suitable for a variety of graduate students in plant and soil sciences programs and interested scientists, deals with principles and is not a review of recent literature. This book, well-illustrated with figures and tables, has 27 chapters, combining theory and practice. Interesting is the inclusion of a variety of appropriate instrumentation examples and research proposals to measure soil and plant water status. At the end of each chapter are biographies of scientists that helped to develop the concepts discussed.
Price: GBP 44.99.
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Can Bangladesh be Protected from Floods? H. Brammer. The University Press Limited, Dhaka, 2004, xvi + 262 p. ISBN 984-05-1695-7. Hardcover.
This is the author's seventh book on soils, agricultural development and disaster management in Bangladesh. A soil scientist by training and experience, Mr. Brammer has spent 35 years in the country. He studied and published widely about the causes and impacts of the different types of floods which periodically ravage Bangladesh, and reviewed the efforts made to mitigate the damage and suffering these events cause. The three chapters in Part I provide background information on the physical environment. They contain a description of conditions of the Ganges-Brahmaputra-Meghna catchments area which determine Bangladesh's vulnerability to rainfall floods, river floods, tidal floods and flash floods; a description of how climate change and a rising sea-level might affect the country's flood vulnerability; and an attempt to dispel some of the myths and misunderstandings about floods, flood impacts and flood mitigation in Bangladesh. The five chapters in Part II describe how floods affect the people and economy of Bangladesh. The single chapter in Part III reviews the technical, economic and institutional issues raised by the changes in policy and strategy, and draws conclusions regarding the implications of these changes for the government and people of Bangladesh. This book is self-sufficient for readers who are not concerned with the main topics covered by the other books.
Price: GBP 22.00.
Orders to: The University Press Ltd., P.O. Box 2611, Dhaka 1000, Bangladesh.

Soil-Water-Solute Process Characterization. An Integrated Approach. J. Álvarez-Benedí and R. Munoz-Carpena, editors. CRC Press, Boca Raton, London, 2005, xxxv + 778 p. ISBN 1-5667-0657-2. Hardcover.
The development and application of methods for monitoring and characterizing soil-water-solute processes are among the most limiting factors in understanding the soil environment. Experimental methods are a critical of scientific papers, and their design and implementation are usually the most time-consuming tasks in research. When selecting a method to characterize a property governing a soil process, the practitioner or researcher

often faces complex alternatives. In many cases these alternatives are bypassed in favour of recommendations from colleagues on well-established methods that might not be the most suitable for the specific conditions of the study. An integrated approach for soil characterization in needed that combines available methods with the analysis of the conceptual model used to identify the governing property of a soil process, its intrinsic nature (variability), and the ultimate use of the values obtained. This holistic approach should be applied to the selection of methods to characterize energy and mass transfer processes in the soil, sorption, transformation, and phase changes, including microbiological processes. The book applies this integrated approach to present a comparative discussion of alternative methods, their practical application for characterization efforts, and an evaluation of strengths, weaknesses, and trade-offs. This book is not a laboratory or field handbook. It has six sections. The first section defines the basis for the strategy that will be developed (i.e., need and use, issues of spatial and temporal variability, and modelling as an integral part of the process). Sections two to four present the critical evaluation of methods available for energy and water transfer, chemical transport, and soil microbiological processes. Different methods of characterization are presented and compared using numerous tables and diagrams to help the users identify the most suitable option for their application. Section five discusses tools and applications to account for the intrinsic temporal and spatial variability and scale of soil processes. The last section is devoted to modelling aspects including uncertainty, inverse modelling, and practical recommendations.
Price: USD 169.95; GBP 97.00.
Orders to: in the Americas: CRC Press, 6000 Broken Sound Parkway, NW, Suite 300, Boca Raton, FL 33487, USA. Email: orders@crcpress.com Rest of world: CRC Press/ITPS, Cheriton House, North Way, Andover, Hants, SP10 5BE, UK. Email: international.tandf@thomsonpublishingservices.co.uk Internet: www.crcpress.com

Soil Sampling, Preparation, and Analysis. Second edition. Books in Soils, Plants, and the Environment. CRC Press, Boca Raton, London, 2005, 680 p. ISBN 0-8493-3499-3. Hardcover.
The second edition of this popular hands-on guide to soil sampling and analysis describes the most common as well as the more recently devised methods used in modern soil laboratories. Extensively revised, updated and expanded by over two hundred pages to reflect recent advances and shifting interest in the field, it covers principles of soil sampling, sources of errors and variability, as well as common procedures for extraction and analysis in soil instrumentation. New chapters on electron microscopy and nuclear magnetic resonance have been added. The book is well-illustrated.
Price: USD 129.95; GBP 74.99.
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State of the World 2005. Redefining Global Security. M. Renner, H. French and E. Assadourian, project directors. L. Starke, editor. The Worldwatch Institute. W.W. Norton & Company, New York and London, 2005, xxvii + 237 p. ISBN 0-393-32666-7. Softcover.
The book takes a new and deeper look at the theme that has dominated international politics since 9/11: security. Not the armed conflicts that occur when it breaks down, but the underlying social, economic and environmental pressures which determine how threatened and vulnerable people feel. These include food, water, other natural resources, exposure to environmental change and health threads. Without equitable and sustainable management of these conditions, lasting security cannot be achieved.
This 22nd edition of State of the World is an illuminating volume that offers a new definition of security and the means to achieve it.
Price: USD 18.95, plus shipping and handling.

Orders to: The Worldwatch Institute, 1776 Massachusetts Avenue, NW, Washington, DC 20036, USA. Fax: +1-570-320-2079. Email: wwpub@worldwatch.org Internet: www.worldwatch.org/pubs/sow/2005/ This book is also published by Earthscan, 8-12 Camden High Street, London, NW1 0JH, UK. Fax: +44.20.7387.8998. Email: earthinfo@earthscan.co.uk Internet: www.earthscan.co.uk

Assessment and Reduction of Heavy Metal Input into Agro-ecosystems. KTBL-Schrift 432.
H. Eckel, U. Roth, H. Döhler, F. Nicholson and R. Unwin, editors. Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V. (KTBL), Darmstadt, 2005, 232 p. ISBN 3-7843-2176-3. Softcover.
This book constitutes the final report of the European Union Concerted Action AROMIS, which was set up by the Association for Technology and Structures in Agriculture (KTBL) in Germany and 23 other institutions from across Europe, aiming to provide a cross national assessment of heavy metals in European agriculture. It is well known that a considerable proportion of heavy metals inputs into soils are a consequence of agricultural activities. However, there are still many gaps in our knowledge of input pathways of heavy metals onto farms and subsequently into the soil. This is especially true in relation to the significance of the various input pathways compared with the total input, to the behaviour of metals in the soils, as well as the options for metal input reduction. The present publication includes the results of the assessment, describes options to reduce the heavy metal input and lists the future research demand.
Price: EUR 30.00 plus postal charges.
Orders to: Landwirtschaftsverlag, Hülsebrockstrasse 2, D-48165 Münster, Germany. Email: zentrale@lv-h.de Internet: www.lv-h.de KTBL internet address: www.ktbl.de.

Scaling Soil Nutrient Balances. Enabling mesolevel applications for African realities. FAO Fertilizer and Plant Nutrition Bulletin 15. FAO, Rome, 2004, xiv + 132 p. ISBN 92-5-105237-9. ISSN 0532-0488. Softcover.
A 1990 macrolevel study that revealed declining soil fertility in Africa triggered microlevel case studies on nutrient flows. This report hypothesizes that a mesolevel approach can offer a valid entry point for policy makers and private sector intervention. The aim is to enable mesolevel stakeholders to better articulate and target scale-specific soil fertility enhancing methods. The report synthesizes studies on soil nutrient stocks, flows and balances for Ghana, Mali and Kenya. It explains nutrient flow calculations, shows how to construct mesolevel nutrient balances, and discusses the differences between levels and between the three countries. The mesolevel approach can consider specific management decisions and physiographical differences, and help target interventions on the basis of microlevel variations in nutrient management. In particular, it can identify constraints, use nutrient flows for planning purposes, and extrapolate results to other areas.
Requests to: National sales agents or: Sales and Marketing Group, Information Division, FAO, Viale delle Terme di Caracalla, I-00100 Rome, Italy. Fax: +39-06-57053360. Email: publications-sales@fao.org Internet: www.fao.org

Use of Phosphate Rocks for Sustainable Agriculture. FAO Fertilizer and Plant Nutrition Bulletin 13. F. Zapata and R.N. Roy, editors. FAO, Rome, 2004, xx + 148 p. ISBN 92-5-105030-9. ISSN 0532-0488. Softcover.
Extensive research on the agronomic potential and actual effectiveness of phosphate rocks as sources of phosphorous has been carried out in Africa, Asia, Latin America and elsewhere. This information is scattered in books, reports of meetings, etc. The present Bulletin gives a comprehensive coverage of the key topics regarding the utilization of phosphate rocks in agriculture, including the latest information on relevant research, and provides guidelines for the direct application of phosphate rocks to the acid soils the (sub)tropics. The selected topics include: world deposits; characterization of phosphate rock sources; evaluation methodologies of sources for direct application; analysis of the biophysical and farming factors that affect the agronomic effectiveness of phosphate rock sources, together with an analysis of the socio-economic factors that influence the use and adoption of technologies as the capital investment to trigger agricultural intensification;

development and use of decision-support systems for the direct application of phosphate rock application; soil P testing for its application; available technologies for enhancing the agronomic effectiveness of indigenous phosphate rock sources; environmental issues; legislation guidelines; and future research areas and priorities.
Requests to: National sales agents or: Sales and Marketing Group, Information Division, FAO, Viale delle Terme di Caracalla, I-00100 Rome, Italy. Fax: +39-06-57053360. Email: publications-sales@fao.org Internet: www.fao.org

Soil Desertification in the River Deltas (Part I). V. Starodubtsev, V. Bogolyubov and L. Petrenko. National Agricultural University of Ukraine, Kiev, 2005, 83 p. ISBN 966-8321-70-7. Softcover.
This report considers recent processes in the river deltas, caused by the regulation of runoff caused by hydropower construction activities and resulting desertification processes.
The delta of the Ily River, a transboundary river rising in the mountains in China and entering Lake Balkhash in Kazakhstan is taken as an example for the study of the runoff during the last fifty years under the influence of the construction of hydropower plants. Especially the changes in the soil are taken into consideration, including the changes in the agricultural productivity in the areas affected by the desertification.
The authors hope that the book is useful for researchers, teachers and students interested in the problems connected with hydropower utilization. See also the related title Dams and Environment: Effects on Soils (2004) announced in Bulletin 105.
Requests to: Prof. V. Starodubtsev, Box 64, P.O. Box 127, Kiev 03127, Ukraine. Email: research@i.com.ua

Multi-Scale Sustainability Evaluation. A framework for the derivation and quantification of indicators for natural resource management systems. Tropical Resource Management Papers 68. S. López-Ridaura. Wageningen University and Research Centre, Wageningen, 2005, 202 p. ISSN 0926-9495. Softcover.
In this volume the methodological development and application of a framework for multi-scale sustainability evaluation of Natural Resource Management Systems (NRMS) are presented. The framework offers a structured and coherent set of guidelines, developed from an interdisciplinary and systematic perspective, to select, quantify, assess and integrate case-specific indicators derived from short and long term environmental, economic and social concerns of stakeholders.
The analysis of key issues related to the sustainability of NRMS at different scales in an area in Mali illustrates the application of the framework at farm household, Arrondissement and Cercle scales. A multi-scale multiple goal linear programming model has been developed, in which indicators at different scales can be used as objective functions and/or as constraints in scenario formulation and assessment. The model is of an explorative nature, identifying the biophysical opportunities for NRMS and allows explicit quantitative identification of the advantages and disadvantages of alternative NRMS in terms of the values of the indicators selected for sustainability evaluation of each of the scales of analysis. The model can also be used to quantitatively describe the trade-offs among different indicators within and between scales.
Requests to: Plant Production Systems Group, Wageningen UR, P.O. Box 430, 6700 AK Wageningen, The Netherlands. Fax: +31-317-484892. Email: office.pp@wur.nl Internet: www.dpw.wageningen-ur.nl/pp/

Limits to Growth. The 30-year update. D. Meadows, J. Randers and D. Meadows. Earthscan, London and Sterling, 2005, xxii + 338 p. ISBN 1-84407-144-8, softcover; 1-84407-143-X, hardcover.
In 1972, Limits to Growth shocked the world and forever changed the global agenda by demonstrating that unchecked growth on our finite planet was leading the Earth towards ecological 'overshoot' and pending disaster. It ignited a firestorm of controversy that burns hotter than ever in these days of soaring oil prices, wars for resources and human-induced climate change. This substantially revised, expanded and updated edition follows on from

Limits to Growth (1972) and its sequel Beyond the Limits (1992), which raised the alarm that we have already overshot the planet's carrying capacity. Marshalling a vast array of new, hard data and more powerful computer modelling, and incorporating the latest thinking on sustainability, ecological footprinting and limits, the present book outlines future overshoot scenarios and makes an even more urgent case for a rapid adjustment of the global economy towards a sustainable path.
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Modelling and Monitoring Soil and Land Use Dynamics within Shifting Agricultural Landscape Mosaic Systems in Southern Cameroon. M. Yemefack. Doctoral dissertation, Utrecht University, 2005, xv + 187 p. ISBN 90-6164-233-7. Softcover. ITC Dissertation 121.
This publication provides quantitative information on short and long-term effects of shifting agriculture on soil and spatial pattern of landscape mosaic dynamics in southern Cameroon. An analysis of this farming system led to the development of a conceptual model of the spatio-temporal dynamics of shifting agriculture, including transition matrices of rotational cycles. Geostatistical characterization of soil variability in the area showed that soil properties are highly spatially dependent even at plot level, with significant sensitivity to soil-forming factors that explained 30 to 70% of the total variation in the subsurface. Shifting cultivation accounted for 30 to 35% of the variation of topsoil. A robust quantitative multi-criteria method was developed for quantifying and selecting soil variables that are most sensitive to these agricultural practices (in this case: pH, calcium, phosphorus, bulk density, organic carbon), considered as the minimum data set (MDS) for characterizing soil conditions in the area. Empirical models of linear/quadratic fractional rational functions were successfully fitted to time series data of these MDS variables to derive quantitative measures on temporal changes in soil with land use. Multi-spectral satellite imagery was able to map with 80% accuracy the extension front of shifting agricultural landscape and the most dynamic land cover types (crop fields, young fallows), which shift every season and every year. The research has produced a set of data and methods that can be used in combination with rare cloud-free satellite images for spatio-temporal simulation modelling of landscape dynamics in order to guide decision-making on agricultural development, land allocation for land use planning and forest resources management.
Requests to: ITC, P.O. Box 6, 7500 AA Enschede, The Netherlands. Internet: www.itc.nl.
The full text can de downloaded from: www.itc.nl/library/academic_output/
For contacting Dr. M. Yemefack, his email is: myemefack@hotmail.com

Soils and Soil Fertility. 6th edition. F.R. Troeh and L.M. Thomson. Blackwell Publishing, 2005, viii + 489 p. ISBN 0-8138-0995-X. Hardcover.
During my university studies I used the second edition of this well-known textbook, and glancing through the second and the sixth edition, one notices some advances in a few of the subjects discussed in the 21 chapters, while in other subjects major advances have been made, and new ones added. This is a classical textbook designed for an introductory course in soils for students in agriculture and environmental sciences. The fifth edition, published more than a decade ago, has been thoroughly updated. The book covers basic topics such as soil formation, soil chemistry and physics, organic matter, mineralogy, soil water movement and storage. As the title implies, the text also includes essential information about plant nutrients, deficiency symptoms, and the fertilizers and soil amendments to correct them. The book also has chapters about GIS and GPS, humus and its function in soil structure and fertility, reclamation of contaminated soils and advances in the understanding of water flow. At the end of the book is a useful glossary.
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www.blackwellprofessional.com

New Dimensions in Agroecology. D. Clements and A. Shrestha, editors. Food Products Press, and imprint of The Haworth Press, New York, London, 2004, xv + 553 p. ISBN 1-56022-113-5, softcover; 1-56022-112-7, hardcover.
The term 'agroecology' was proposed in the 1930s, but it became a discipline in its own right in the 1980s. The roots of an ecological approach to agriculture go back to the dawn of the agricultural revolution, when early farmers could contend with the elements only by understanding the ecological forces that could be wielded to design an agroecosystem. Recently, as traditional agronomic approaches have faced various economic and societal pressures, agroecology has been seen as a serious alternative and is now being introduced as a course or even a department at a number of colleges and universities. The idea of this book is to aid this process by incorporating contributions from researchers who have been working in agroecology with that of other people making headway in the area. The overall theme being developed is that ecological approaches offer numerous dimensions to help meet the challenges of agriculture. Agroecology strives to bridge two fields: agronomy and ecology, and thus to bring holism to agriculture. This stretching of perspective is evident throughout the book, be it stretching from the field level to the landscape level, or from the level of bioengineering a gene to incorporating that gene within a complex ecological system-the agroecosystem.
Price: USD 69.95 (softcover); USD 89.95 (hardcover).
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Crops and Environmental Change. S.G. Pritchard and J.S. Amthor. Food Products Press, an imprint of The Haworth Press, New York, London, 2005, xii + 421 p. ISBN 1-56022-913-6, softcover; 1-56022-912-8, hardcover.
The subtitle of this book is: An introduction to effects of global warming, increasing atmospheric CO2 and O3 concentrations, and soil salinization on crop physiology and yield.
Our environment-the one we live in and grow our crops in-is changing. Although environmental change is older than agriculture, and farmers have always had to contend with some type of environmental change, several notable, ongoing environmental changes have especially important implications for crop yields, production, and quality, as mentioned in the subtitle. These environmental changes are largely caused by human activities. This book is about the effects of environmental changes on the physiology, growth, and yield of major field crops. The goal is to provide an introduction to the ramifications, both positive and negative, on these ongoing environmental changes for present and future crop production and food supply. This easy to read book is supported with by many figures and tables and an extensive list of references.
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Development of Pedotransfer Functions in Soil Hydrology. Developments in Soil Science 30. Ya. Pachepsky and W.J. Rawls, editors. Elsevier, Amsterdam, Boston, 2004, xxix + 512 p. ISBN 0-444-51705-7. Hardcover. ISSN 0166-2481 (series).
Obtaining parameters of hydrological processes remains one of the largest problems in soil science and hydrology. This book is a compendium of ideas, conceptual approaches, techniques, and methodologies for estimating soil hydraulic and related parameters from readily available soil data. Pedotransfer functions provide such estimates and translate data we have into data we need. The book covers many pedotransfer results that will be useful in helping scientists and engineers across a range of soil-related disciplines and will help readers develop a greater understanding of how to parameterize hydrological processes using information on soil texture, soil structure, organic matter content, chemical, mineralogical, and mechanical properties, topographical information and remote sensing data. The authors present the state-of-the-art in addressing the fundamental

issues of accuracy, reliability, and utility of pedotransfer functions. The book offers novel approaches based on data mining, artificial intelligence, fuzzy logic, and modern statistics to discover pedotransfer relationships to estimate soil water retention, soil hydraulic conductivity, parameters of solute retention and transport, and parameters of soil erosion processes. The book ends with some case studies from temperate and tropical regions.
Price: EUR 169.00; GBP 115.00; USD 184.95.
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Under Ground. How Creatures of Mud and Dirt Shape Our World. Y. Baskin. Island Press, 2005, 237 p. ISBN 1-59726-003-7. Hardcover.
This is a very well written book about an intriguing subject, and, therefore, it was a pleasure to read it! To quote Paul R. Ehrlich, Professor of Population Studies at Stanford University, "This is, at last, a fresh, comprehensive understanding of soil and its wonderful world of unseen biodiversity. One of the most talented science writers, Yvonne Baskin, has presented a clear view of amazing creatures and microbes and their profound influence on the surface world, including our national economies. Under Ground will be both fascinating for laypersons and extremely useful for scientists like myself who understand how critical the soil is but know too little about it." The author leads the tour to this virtually uncharted territory, from the polar desert of Antarctica to the coastal rain forest in Canada to the wetlands of the Mississippi. She introduces nematode worms and mud shrimps to mycorrhizal fungi and explores how their work sustain our green productive world above. She also explores the alarming threats that air pollution, trawl fishing, wetland destruction and other human impacts pose to these unique creatures and how their loss, in turn, affects our own well being. This book is an outgrowth of the SCOPE (The Scientific Committee on Problems of the Environment) Soil and Sediment Biodiversity and Ecosystem Functioning (SSBEF) project, which organized a series of workshops between 1996 and 2002.
Price: USD 24.95.
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An Introduction into Applied Soil Hydrology. Lecture Notes in GeoEcology. K. Bohne. Catena Verlag, Reiskirchen, 2005, 224 p. ISBN 3-923381-51-4. US-ISBN 1-59326-260-4.
Starting this year, Catena Verlag plans a new series entitled 'Lecture Notes in GeoEcology', of which the present publication is the first one.
Based upon almost 40 years of teaching experience, the author prepared the scope and contents of this soil hydrology book especially for readers with limited mathematical and physical backgrounds. The text is primarily written from an engineering approach and is intended for students as well as for researchers in neighbouring disciplines. The readers can better understand how processes in porous media may affect land use and related impacts on the environment. The book will help them to apply principles of soil hydrology to meet the growing challenge of environmental problems as well as to solve questions in sustainable agriculture.
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Orders to: Catena Verlag, Ärmelgasse 11, D-35447 Reiskirchen, Germany. Fax: +49-6408-64978. Email: catenaverl@aol.com Internet: www.catena-verlag.de Or: HSU Bookstore, Catena Verlag Distribution, Humboldt State University, Arcata, CA 95521, USA. Internet: www.humboldt.org/bookstore.

Sustainability of Agrosilvopastoral Systems. Advances in GeoEcology 37. S. Schnabel and A. Ferreira, editors. Catena Verlag, Reiskirchen, 2004, 389 p. ISBN 3-923381-50-6. US-ISBN 1-59326-245-0. Hardcover.
This book contains selected papers presented during the symposium 'Sustainability of Dehesas, Montados and other Agrosilvopastoral Systems', which was held in Cácares in

2003. Agrosilvopastoral systems are widespread in the Mediterranean but are also found in other areas of the world having similar climatic conditions. In the southern and western past of the Iberian Peninsula these land use systems have existed for many centuries, and are commonly formed by open evergreen oak woodlands, covering approximately 4 million hectares. These are areas referred to as montados and dehesas of Portugal and Spain, which traditionally are exploited by multiple land use including livestock breeding, forestry and crop cultivation. They are important in an environmental sense as well as socio-economically. They support an outstanding diversity of wildlife, form unique landscapes, are the source of high-quality food derived from animal production, sustain rural population, and constitute an important basis for the growing demand of rural leisure and tourism. These areas have, however, undergone rapid changes during the second half of the 20th century, shifting from traditional farming systems to more simplified systems causing decreasing diversity of land use and inadequate management techniques. Land and pasture degradation are recognized as important problems. The volume has six sections. Section I presents general aspects of agrosilvopastoral systems in the Mediterranean basis. Section II treats economic and social aspects. Section III presents studies on soil water dynamics and soil degradation. In section IV the linkages between livestock and vegetation are discussed. Section V has several case studies, while the last section is dedicated to the sustainability and management of agrosilvopastoral systems, including studies from the Mediterranean as well as from California.
Price: EUR 119.00; USD 119.00.
Orders to: Catena Verlag, Ärmelgasse 11, D-35447 Reiskirchen, Germany. Fax: +49-6408-64978. Email: catenaverl@aol.com Internet: www.catena-verlag.de Or: HSU Bookstore, Catena Verlag Distribution, Humboldt State University, Arcata, CA 95521, USA. Internet: www.humboldt.org/bookstore.

Lithuanian Bibliography of Soil Science, Plant Nutrition and Soil Cartography. 1971-2000. Compiled by A. Motuzas and K. Grigaliuniene. Lithuanian University of Agriculture, Kaunas, 2005, 382 p. ISBN 9955-448-31-8. Softcover.
This publication is dedicated to commemorate the 120th birth anniversary of Viktoras Ruokis (1885-1971), who was the initiator of Lithuanian soil science and founder and chairman of the Lithuanian Soil Science Society. It is a sequel to 'The Lithuanian Bibliography of Soil Science, Agrochemistry, Soil Fertilization and Cartography', which was published in 1975, which lists relevant works until 1970. The bibliography is divided into 18 chapters, as in the first book. The material is presented following the alphabetic order of the names of the authors (first Latin, then Cyrillic). Titles are entered in the original language. Doctoral dissertations from 1970-200 are mentioned separately.
Requests to: Prof. A. Motuzas, President of the Lithuanian Soil Science Society, Lithuanian University of Agriculture, Kaunas, Lithuania.

Trace and Ultratrace Elements in Plants and Soil. Advances in Ecological Sciences volume 20. I. Shtangeeva, editor. WIT Press, 2005, 348 p. ISBN 1-85312-960-7. ISSN 1369-8273.
Hardcover.
Little attention has so far been paid to the majority of the ninety elements that occur in soil and in different plant species. At present, however, the increasing capability and improving sensibility of modern analytical methodologies is resulting in the rapid development of ultratrace element research. This may serve as a basis for new findings that relate to the biogeochemistry of elements of unknown biological significance. This book describes different aspects of analytical chemistry, rhizosphere chemistry and the environmental chemistry of trace elements. It also highlights areas where collaboration between biochemists, soil scientists, analytical chemists and plant physiologists would be most productive. The contributors focus on the current state of our knowledge and future potential for understanding the biogeochemistry of both well-known toxic elements and rare ultratrace elements of unknown biological role. Since the environmental chemistry of trace elements is controlled by a number of different interacting processes, there are also

detailed reviews of the biology and chemistry of the rhizosphere, factors affecting the bioavailability of different trace elements in soil, potential phytoremediation methodologies and other applications.
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Microorganisms in Soils: Roles in Genesis and Functions. Soil Biology Series volume 3. F. Buscot and A. Varma, editors. Springer-Verlag, Berlin, Heidelberg, 2005, xxii + 422 p. ISBN 3-540-22220-0. Hardcover.
Soils would not exist without the complex and heterogeneous activities of microorganisms. For the third volume of Soil Biology, researchers shed light on the significant role of these organisms. The following key topics are covered: Microorganisms in bioerosion, humification, mineralization and soil aggregation; Microbial energetics and microbes in biogeochemical processes such as carbon and nitrogen cycles and phosphorus bio-availability; Interactions in the mycorrhizosphere; Impacts of microbes on plant on plant nutrient cycling and the possible effects of transgenic rhizospheres on soil fungi; Functions of microbes in specific soil compartments such as soil surface or toxic metal polluted soils; Regulation on microbial activities in functional domains that are influenced by biotic or abiotic factors; Uses of marker genes and isotopes as examples for modern techniques in soil microbiology.
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Manual for Soil Analysis – Monitoring and Assessing Soil Bioremediation. Soil Biology Series volume 5. R. Margesin and F. Schinner, editors. Springer-Verlag, Berlin, Heidelberg, 2005, xvi + 366 p. ISBN 3-540-25346-7. Hardcover.
Reliable methods for monitoring and assessing soil quality as a prerequisite for successful soil bioremediation projects. This volume presents detailed descriptions of selected methods for evaluating, monitoring and assessing bioremediation treatments of soils contaminated with organic pollutants or heavy metals. Traditional soil investigations techniques, including chemical, physical and microbiological methods are complemented by the most suitable modern methods, such as the use of bioreporter technology, immunological, ecotoxicological or molecular assays. Feasibility studies for bioremediation treatments complete the manual. Easy to follow protocols with step-by-step procedures, lists of the required equipment and reagents as well as notes on the evaluation and quality control allow immediate application. Short introductions to the principles and objectives help to assess the field of application of each procedure.
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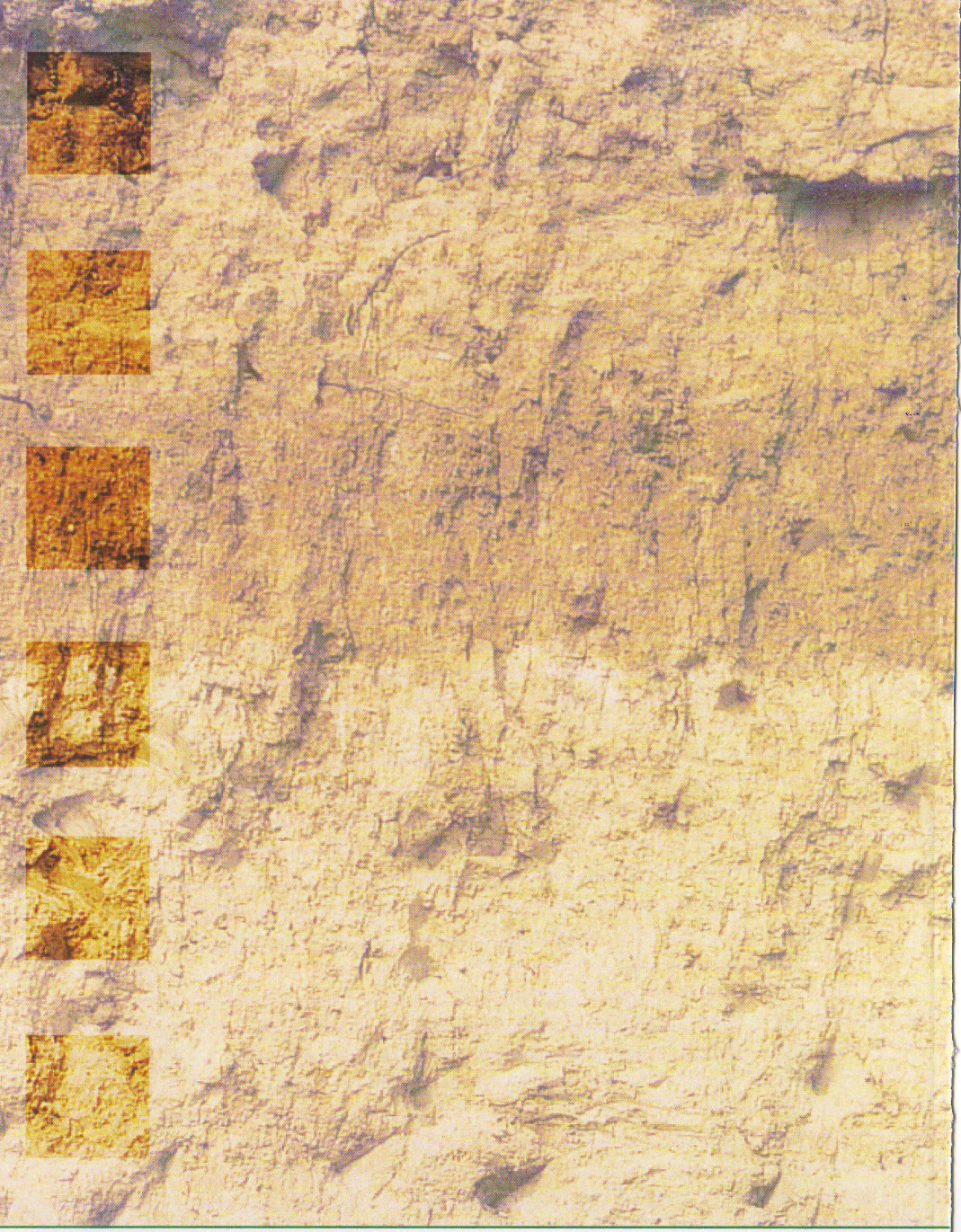

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