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Editorial

This is the first Bulletin edited by the new 'team' of Stephen Nortcliff and Alfred Hartemink, and is being compiled in Wageningen. Stephen Nortcliff is Professor of Soil Science at the University of Reading in the United Kingdom; Alfred Hartemink is a soil scientist at ISRIC - World Soil Information in Wageningen. Our first and most pleasant task is to most sincerely thank our predecessors Winfried Blum and Hans van Baren for all their efforts on behalf of ISSS and IUSS. If you have your collection of Bulletins over the last 12 years you will see how Winfried Blum developed a distinctive style of Bulletin which kept the members of ISSS and subsequently IUSS well informed. Hans van Baren has made a significant contribution to the Bulletin with his section reviewing publications and it is with great pleasure that we are pleased to accept his offer to continue in this role, as our enquiries suggest this is a section most valued by the membership.

The production and distribution of this issue of the Bulletin responds to the new structure of IUSS. In IUSS individuals no longer form the membership as was the case with ISSS, rather the membership is based predominantly on National Societies or organisations representing the soil scientists of a country (for example, in the United States of America the IUSS adhering organisation is the National Academy of Sciences, which liaises with the SSSA through the National Soil Science Committee). Most of you are members of IUSS through your membership of a National or Regional Society, who will pay a membership fee to IUSS based on their total national membership. In this Bulletin we have included a brief description of how IUSS is organised to aid with your understanding of the changes. As a result of this reorganisation in our structure, IUSS can now be said to be truly representative of the world's soil scientists and has a membership well above 50,000. Our task is to ensure that we satisfactorily and appropriately represent this much increased membership in a wide range of fora and assist in the international promotion of soil science and soil scientists.

This issue of the Bulletin, or rather its contents, will reach most of you through your National Societies or their equivalents, as it is no longer to be dispatched to individuals. As things develop we plan to move away from the production of a paper format towards an electronic format either dispatched as a CD or as an electronic attachment. We realise for some this is considered a retrograde step and shall continue to produce a small number of paper copies, but an additional payment will be required to receive this directly. Since the establishment of our web site at www.iuss.org we have posted the most recent Bulletins in an accessible format on this site and indeed most of what is in this Bulletin is already on the website, in most cases within a short time of being received.

It is always difficult taking over from a well established organisation which has operated smoothly and efficiently, but we hope you will allow us the time to develop our own style. We are very receptive to you observations and contributions, indeed without your contributions the Bulletin will fail! Please send your contributions electronically to iuss@rdg.ac.uk or Alfred.hartemink@wur.nl or by traditional mail to our postal addresses. With your assistance we shall build on the solid foundations established by our predecessors and continue to promote the importance of soils and soil science on a broad platform.

Stephen Nortcliff and Alfred Hartemink
Wageningen, Summer 2003.

MESSAGE FROM THE IUSS PRESIDENT

Greetings to All IUSS Members and Colleagues,

I am honored to serve as your President for the next three years. We have an excellent new leadership team with Gary Petersen as Vice President, Stephen Nortcliff as Secretary-General, and Alfred Hartemink as Deputy Secretary-General. We also appreciate the fine efforts of Peter Luescher as Treasurer. Peter has served IUSS very well, and will step down as Treasurer at the end of the year. We are also pleased to have Robin Harris as Chair of the Committee on Budget and Finance (CBF), John Kimble as Chair of the Committee on Statutes and Structure (CSS), and Winfried Blum as Chair of the Committee on Prizes and Awards (CPA). There are many exciting activities ongoing and being planned in IUSS to further promote our science and to enhance the visibility of soil science to other professionals, policymakers, and the general public. I want to briefly tell you about several of these developments and activities.

If you have not had an opportunity, please check the IUSS Website at www.iuss.org. There is extensive information on IUSS, the officers and divisional and commission officers, World Congresses of Soil Science (WCSS), upcoming meetings, activities of the divisions and commissions, past and current IUSS Bulletins, publications, and job openings. Also included are the IUSS statutes and by-laws, honorary members, and links to national soil science societies. We owe Alfred Hartemink a great deal of thanks for creating and maintaining the Website.

As most of you know, our new scientific structure was implemented at the close of the 17th WCSS in Bangkok last August. At the 17th WCSS, Division Chairs and Commission Officers were elected. The names and contact information of the elected officers, as well as appointed Divisional Vice Chairs, and descriptions of the divisions, commissions, and working groups are listed on the IUSS Website. These officers will provide the scientific leadership for IUSS and are already planning symposia and programs for the next few years. They would welcome your suggestions on programs, symposia, and initiatives.

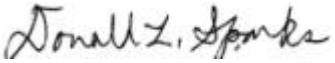
IUSS has established two new awards that will be presented at the WCSS. The Dokuchaev Award will be presented for distinguished contributions in basic soil science research and the Liebig Award will be given for seminal contributions in applied soil science research. Details on the nomination process will be provided in forthcoming Bulletins and on the Website. We are also exploring avenues for establishing a Year of the Soil in 2006 and/or an Annual Day of the Soil to enhance the visibility and importance of soils and soil science to the international community.

The IUSS Inter-Congress Meeting is scheduled for April 25-28, 2004 in Philadelphia, PA. Attendees will include the IUSS Executive Committee, divisional and commission officers, subcomission and working group chairs, honorary member representatives, and country representatives to the IUSS Council. Major agenda items will include finalizing the scientific program for the 18th WCSS and Council meetings. There will also be an accompanying persons program and a tour of the 18th WCSS venue.

A major activity of IUSS is the planning for the 18th WCSS in Philadelphia, Pennsylvania, USA, July 9-15, 2006. The theme of the Congress is “Frontiers of Soil Science: Technology and the Information Age”. Larry Wilding and Lee Sommers are serving as Co-Chairs of the Organizing Committee, and are being ably assisted by a host of other fellow soil scientists who are planning a stimulating scientific program, an array of scientific and cultural tours, and enjoyable social events. Philadelphia is located only 80 km from the Atlantic Ocean, about 161 km south of New York City, and 192 km north of Washington, D.C. International and domestic travel to and from Philadelphia is available from major airline carriers and train service is also available to and from major cities on the U.S. East Coast. Philadelphia is known as the cradle of democracy, and served as the U.S. capital from 1790-1800. The Declaration of Independence was adopted in Philadelphia, and the U.S. Constitution was written here. Philadelphia is home to Independence Hall, the Liberty Bell, and many other historical

attractions. In addition to being one of America's most historic cities, it is rich in the arts and sciences, being home to the world class Philadelphia Museum of Arts, the Rodin Museum, the Pennsylvania Academy of Fine Arts, the Franklin Institute Science Museum, and the Academy of Natural Sciences. I cordially invite all of you to attend and participate in the 18th WCSS. For more details on the 18th WCSS, please refer to the Website at www.18wcss.org.
Many thanks for your support and promotion of IUSS.

Best wishes,



Donald L. Sparks
IUSS President

IUSS ORGANISATION

How are we organised?
Below we have outlined how IUSS is organised and have sought to illustrate the structure of the Union now that the new organisational framework has been established (moving to a main scientific organisation based on the four Divisions with Commissions within Divisions and Working Groups addressing cross commission and cross Division activities.

Bureau:	President, Vice President, Secretary General, Deputy Secretary General		
Executive Committee:	President, Vice President, Secretary General, Deputy Secretary General	Past President, Past Vice-President, Future President, Future Vice-President [1], Treasurer, Divisions chairs, Standing Committee Chairs	
Council:	President, Vice President, Secretary General, Deputy Secretary General	Past President, Past Vice-President, Future President, Future Vice-President, Treasurer, Divisions chairs, Standing Committee Chairs	Representatives of Full Members, Honorary members,

[1] – President and Vice-President serve eight years starting with two years as Future President and Vice-President, four years as President and Vice-President culminating in the World Congress of Soil Science in their country, and then two years as Past President and Past Vice-President.

Bureau = The Bureau is the collective name for the IUSS Officers, i.e. the President, the Vice-President the Secretary-General, and the Deputy Secretary-General. The President or Vice President of the Union chairs Bureau meetings.
Executive committee = The Executive Committee consists of the Bureau, the past- President, past-Vice-President and the Treasurer, and the Chairpersons of the Divisions and Standing Committees of the IUSS.
Council = The Council is the supreme body of the IUSS, and carries general responsibility for the efficient functioning and the success of the IUSS. The Council consists of the Executive Committee, one accredited representative from each Full Member, and three elected Honorary Members.

Members = There are several categories of membership.
Full Members National Societies of Soil Science, or alternatively national organizations representing the soil scientists of that country, may join as Full Members. Only one organization can join from each country. Where the adhering organization is different from the National Soil Science Society, the National Society shall be a part of, or have a formal agreement with, the adhering organization. Regional associations may be formed by a group of countries that do not have a National Soil Science Society, so that the associations may become Full Members**.** To become a Full Member the agreed upon subscription fees must be paid.
Associate Members Small National Soil Science Societies, societies or associations for related disciplines, may be admitted as Associate Members.
Individual Members Individuals may have Individual Membership and retain their link directly with the IUSS, if they reside in a country or region that is not a Full Member of the IUSS. They will have the same rights as society members, but will receive publications directly from the IUSS, and will pay ae subscription as defined in the Bye-laws. They will not have a vote or seat in Council, but their members will have all other rights as Members. . Honorary Members will be elected by Council, and shall be soil scientists of great distinction and international reputation, who have given service to the ISSS and/or the IUSS.

Honorary Members Nominations!
Honorary Members will be elected by Council, and shall be soil scientists of great distinction and international reputation, who have given service to the ISSS and/or the IUSS. The number of Honorary Members that can be elected at any one IUSS World Congress of Soil Sciences shall not exceed 0.03% of the active Members. The nominations for Honorary Membership with supporting documentation as defined in the Bye-Laws shall be made to the Secretary-General by a Full Member at least 6 months before the mid-congress meeting of the Council The nominations should be distributed to the Council members at least three months before the mid-congress meeting. Elections shall take place among Council members present for the mid- congress meeting and the results announced, at the IUSS World Congress of Soil Sciences.
Nominations to be received by the Secretary General BEFORE mid-October 2003!

Officers of divisions and commissions are nominated through divisions

Guide for voting and nominations
The policy on nominations and voting is one that has been the focus of much attention by the Standing Committee on Structure and Statutes. Whilst these procedures are not yet finalized nor approved by Council, the following are extracts from the current drafts of the Statutes and Bye-Laws:-
The following is extracted from the Statutes
K1. The Council will establish an Electoral Committee that will manage the election procedures. The composition and duties of the Electoral Committee are defined in the Bye-Laws (3.3).
K2. The Divisional Nomination Committees will solicit candidates for the different offices within the Divisions and Commissions, screen potential candidates and provide candidate lists to the Electoral Committee for preparation of ballots one year in advance of the next Inter-Congress Meeting.
K3 Voting for all Divisional and Commission officers shall take place starting 6 months before Inter-Congress Meeting and be completed within 60 days.
K4. Voting by Members can be done by postal or electronic means using a procedure developed by the National Society or adhering organization to the Union. Results of the

election will be reported by the National Society or adhering organization to the Electoral Committee via the Secretary-General.

K5. Elections will be decided by a simple majority of votes cast.

K6. All officers except the President, Vice-President **and appointed First Vice-Chairs of the Divisions** can be re-elected for one further term. The Secretary-General, Deputy Secretary-General, Treasurer, **and Chairs of Standing Committees** can be re-elected by Council several terms.

K7. The election of Working Group officers shall take place at any organized meeting of the Working Group and elected officers will serve a 4-year term starting after the election. Working group chairs can be re-elected once. Their names will be submitted to the Secretary-General as soon as possible after the election takes place.

K8. The Honorary Members to serve on Council shall be elected by a postal or electronic vote by the whole body of Honorary Members as managed by the Secretary General .at least 3 months in advance of the Mid-Congress Meeting.

This text is from the Draft Bye-laws

3.1 Elections, candidates and nominations.

a) **Members** (as defined in Statute B) who are in good standing with a National Soil or Geoscience Society with close affiliation with the discipline of soil science can take part in the voting procedure. It will be the responsibility of the Adhering Organization or National Society to determine who is in good standing and is eligible to vote.

b) **Members** can vote for as many different officers as they feel comfortable. Voting will be by postal and/or electronic methods. Voting will be conducted in advance of the Inter-Congress meeting (as defined in K1-K4). The

c) If **Members** have joined more than one National Society, they must choose one of these, and ensure that they are registered to vote with this one by the National Society. The records of **Individual Members** (as in Statute B3), **Life Members** (remaining from the ISSS), and **Honorary Members** (as in Statute B7) will be held centrally by the Treasurer. The **Full** or **Associated Members** will maintain lists of other **Members**.

d) The Divisional Nominating committees shall consist of the Chair and Past Chair of the Division as well as one member from each commission within the Division). Divisional nominating committees shall submit nominations to the Electoral Committee at least 12 months in advance of the next Inter-Congress meeting for all officers within the Division including all the Commissions within the Division (see Statutes K2). Nominations of candidates will be accompanied by a paragraph stating qualifications. Every effort shall be made to have a broad geographical representation of nominees. The screening of potential nominee candidates should result in two nominees for each position.

e) Any person nominated as a candidate must be a **Member** in good standing as defined in Statute B2, B3, B4, and B7.

f) The host country shall nominate members who are in good standing for the First Vice-Chairpersons of each Division. 6 months before the next Congress (Statute G3). These candidates will be presented to Electoral Committee for ratification.

The Electoral Committee shall ensure that there is a full list of acceptable names for all offices and that the ballot has a broad geographical representation of candidates.

IUSS WEBSITE

The website of the IUSS was established in April 2002. The IUSS website has been designed to provide IUSS members with information about the Union, and to provide links and interesting information about soil and soil related activities throughout the world. From the beginning a simple and flat website was envisioned that should be promptly accessible in those parts of the world where internet connections are slow. The site consists of a series of htmls with clickable menus to other htmls or direct links or PDFs of documents. The Upcoming meetings section contains a list of meetings from 2003 to 2010. All Division and Commission officers including their addresses are listed. The number of monthly visits to the IUSS website has steadily increase and currently the site is visited about 2000 times per month (70 visits per day). The website is increasingly been used and is expected to be the main communication medium for IUSS members. We continue to develop links with national scoil science societies and share information. Please send all information to alfred.hartemink@wur.nl

Alfred Hartemink
Wageningen, 24th June 2003

IUSS AWARDS

DOKUCHAEV AWARD – LIEBIG AWARD

Two awards are presented by IUSS at each World Congress of Soil Science (WCSS) to recognize outstanding contributions in two specific areas:
- *IUSS-Dokuchaev Award* for basic research in soil sciences
- *IUSS-Liebig Award* for applied research in soil sciences

These two awards are differentiated by the type of contribution rendered, not by professional membership grouping. Eligible are members of the International Union of Soil Sciences. Only one award can be given to one person or group of persons during one year.


V.V. Dokuchaev
(1846-1903)


J. von Liebig
(1803-1873)

Criteria

IUSS-Dokuchaev Award

This award will be made for major research accomplishments, resulting from basic researches in soil sciences. The award may be made for outstanding research results in the field of basic soil science. The award consists of a certificate and US$ 1000.

IUSS-Liebig Award

This award recognizes outstanding contributions in applied soil science research, contributing to new discoveries, techniques, inventions or materials that increase plant production, improve environmental quality or conservation, land and water development and other areas covered by the divisional structure of IUSS. The award consists of a certificate and US$ 1000.

Eligibility of nominators and nominees

Nominations for both awards are accepted only from members of the Union. Members of the awards committees are ineligible to make nominations. Nominees for the awards must be living at the time their nominations are submitted. No age limit is specified for the awards. Members of the awards committee are ineligible to be nominated.

Nomination procedures

Preparation: Preparation of the best nomination possible for a distinguished colleague is a compliment to both the nominee and the nominator, and it provides maximum assurance that the nominee will be selected to receive the award. Obtaining the assistance of the nominee in supplying information is permissible and may improve the accuracy and completeness of the documentation. Clearly identifying and evaluating the nominees contribution is the most important part of the nomination, because nominations are ranked primarily on this basis.

Format: Each nomination must contain the nomination proper and one copy of each supporting letter (not more than three letters). A cover letter from the nominator is not necessary; if the nominator includes a cover letter, it will be considered as one of the three (maximum) supporting letters. The total nomination package must not exceed 10 pages. This translates to 7 pages maximum for the body of the nomination, plus the three one-page letters of support.

NOTE: It is imperative that nominations do not exceed the length specified in these instructions. Nominations that exceed the specified length will not be considered. All nomination materials must be submitted to the Chair of the *Committee on Prizes and Awards (CPA)*. This can be done by E-mail as well as by regular mail.

Deadline: The deadline date for receipt of the nominations is 12 months before the beginning of the next WCSS at which the prizes are to be bestowed.

Processing of nominations

The *Committee on Prizes and Awards (CPA)* evaluates the nominations. This can be done by correspondence and need not involve a meeting of the Committee itself. The Committee sends its recommendation to the President of the Union, with a copy to the Secretary-General. Persons selected to receive the Award are informed promptly by the Secretary-General after a decision has been taken by the *CPA*.

If a nomination is not successful, it can be re-submitted after four years.

Nomination format

The nomination documents must contain the following information: Title of the award, with the name of the nominee and the name of the appropriate award.

Nominee: Include the name, mail address (with zip code), telephone number and E-mail address.

Nominator: Include the name, position, signature, mail address, telephone number and E-mail address.

Qualifications of the nominee:

1. degrees received (with field, date and institution for each degree);
2. membership in honorary academic societies;
3. honours and awards received;
4. professional positions held (with years, organisations and locations);
5. professional publications, giving the total number (not the titles) of professional publications in each of the following categories:
   a. books written
   b. books or other publications edited
   c. chapters of books written
   d. technical papers, refereed
   e. technical papers non-refereed
   f. non-technical papers
   g. patents
   h. invited lectures, seminars or symposia presentations
   i. other related oral, written or visual presentations or products

   In addition, list only the ten (10) most significant publications, patents, presentations or products in literature citation form.
6. Professional contributions, other than publications (not more than 3 pages). Identify and briefly list in this section the contributions, other than publications, on which the nomination is based.
7. Organization(s) of which the nominee is a member.

Evaluation (not more than three pages):

A concise summary and evaluation of the nominee's significant contributions; explain why the nominee is especially well qualified to receive the award.

Supporting letters:

Not more than three supporting letters are to be included, each one page in length. upporting letters are solicited by and addressed to the nominator. Members of the Awards Committee are not eligible to write supporting letters. If there is no acceptable candidate, the award will not be given.

Winfried Blum
Chair IUSS Standing Committee Prizes and Awards

IUSS & ICSU

IUSS as a Scientific Union is a member of ICSU the International Council for Science, having joined in 1993. ICSU is a non-governmental organisation, founded in 1931 to bring together natural scientists in international scientific endeavour. Its national membership comprises 73 National Scientific Members (science academies or scientific research councils), 27 single discipline Scientific Unions and 24 International Scientific Associates. This wide spectrum of scientific expertise enables members to address major international, interdisciplinary issues which none of the members could answer alone.

ICSU with its headquarters in Paris seeks to use the specialist expertise of its unions, by breaking through the barriers of specialisation by initiating and co-ordinating major international and interdisciplinary programmes and by creating interdisciplinary bodies which undertake activities and research programmes of interest to several members. A number of bodies set up within ICSU also address matters of common concern to all scientists, such as

capacity building in science, environment and development (e.g. SCOPE), management of and access to data (e.g. CODATA) and the free conduct of science.

The Council acts as a focus for the exchange of ideas and information and the development of standards. ICSU organises or co-organises many meetings and symposia around the world, and publishes a wide range of newsletters, handbooks and journals.

ICSU is funded by fees from its National Members and Scientific Unions, with support from UNESCO and other UN bodies for contracts and grants, and diverse funding of specific activities from a variety of foundations. The General Assembly of ICSU is held biennially, and in addition the Unions meet formally between these General Assembly Meetings and less formally subsets of the Scientific Union membership will meet to discuss particular tasks or initiatives which cut across the disciplinary boundaries of the Unions, most recently IUSS has been involved with other Unions in discussing the broad topic 'Health and Wellbeing'.

In addition to involvement in the general activities of ICSU, IUSS has specific involvement in SCOPE (Scientific Committee on Problems of the Environment) with Professor Keith Syers and Professor Emmanuel Frossard as our representatives; and in CODATA (Committee on Data for Science and Technology) with Professor Marc van Miervenne as our representative.

For a relatively new member of ICSU we have had strong involvement in recent years through the very active participation of our previous Secretary General Winfried Blum and our Chair of the Standing Committee on Interdisciplinary Cooperation John Kimble. The current Executive Director of ICSU is Professor Thomas Rosswall, an eminent soil scientist.

Stephen Nortcliff
Secretary General

Executive council meeting London, March-April 2003

The Executive Committee of IUSS met at University College, London from 31st March to 2nd April 2003. This meeting gave the opportunity to discuss a wide range of topics, review the status of IUSS and plan for the future. The key topics discussed were:-

- Winfried Blum and Hans van Baren were thanked for the care and attention they had given to maintaining and developing ISSS and IUSS and were presented with framed certificates acknowledge their outstanding contributions to ISSS, IUSS and Soil Science.
- The financial status of IUSS was reviewed. Under the careful stewardship of Peter Luescher over the last 12 years, the finances of ISSS/IUSS have been developed successfully and the Union is now on a sound financial footing. The considerable achievements of the Treasurer were evidenced in the financial status of the Union and he was thanked for these efforts.
- Although the Union had changed its format for collecting membership dues from that based on individual membership to contributions on a national basis, there was still a great deal to be done in ensuring that all National or Regional Members subscribed in this new format. The Chair of the Budget and Finance Standing Committee, Robin Harris, was charged together with the Secretary General, with ensuring that the subscription base of the Union was fully developed in line with the new structure.
- The Committee was made aware of the considerable debate taking place amongst some of the membership of Division One (Soils in Space and Time) concerning whether the term Pedology should feature in the title of the Division. Whilst the debate had proved interesting, there seemed to be no consensus on this matter. The Executive Committee recommended to Council that no change should be made to the title of Division

- In Bangkok, Council had discussed and indeed resolutions were passed to pursue the ideas of 'The Year of the Soil' and a 'World Soil Day'. Although moving these ideas forward was proving somewhat difficult, the Executive Committee resolved to continue efforts in these areas with the assistance of further contacts through ICSU and other international and supra-national organisations.
- The Executive Committee reviewed the activities of subcommissions, which are no longer a feature of the scientific structure of IUSS. It was agreed that the Executive Committee would recommend to Council that Subcommission A (Salt affected Soils) become an interdivisional Working Group; Subcommission B (Micromorphology) be merged with Commission 1 of Division 1; Subcommission E (Forest Soils) become an interdivisional Working Group.
- Working Groups are a key component of the new structure particularly for activities that 'cut across' Divisional boundaries.
- Following discussion the Executive Committee resolved to recommend to Council that three of the previously established Working Groups should be established as Commissions. Working Group PM (Pedometrics) should be established as a Commission within Division 1; Working Group PP (Palaeopedology) should also be established as a Commission within Division 1; Working Group MO (Interactions of Soil Minerals with Organic Components and Microorganisms) be established as a Commission within Division 2, if possible with a revised shorter title.
- The Executive Committee resolved to request reports from all Divisions, Commissions, Subcommissions and Working Groups for review at the next meeting of Council in April 2004.
- Since the days of ISSS the Society/Union has acknowledged a number of scientific journals as Co-operating Journals. This status allows the Journal to display the IUSS logo and advertise itself as a Co-operating Journal of the Union. All IUSS members may apply for discounted subscription rates for these journals. Our Bye-Laws also state that the publishers should pay a small fee for this status. To date no fees have been collected. The Secretary General was directed to liaise with the publishers with the aim of collecting an annual fee of $250 in respect of each Co-operating Journal.

This meeting was considered a success, many matters pertaining to the Union were dealt with and the Executive Committee (key to the successful running of the Union) were able to get to know each other and discuss the matters facing the Union face to face rather than through the 'faceless' means of electronic communication!

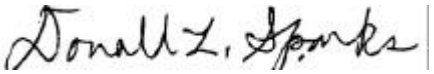
Stephen Nortcliff
Secretary General

18th World Congress of Soil Science

Welcome

On behalf of the Organizing Committee and the IUSS Officers, I invite you to attend the 18th World Congress of Soil Science (WCSS), July 9-15, 2006, in Philadelphia, Pennsylvania, USA. I encourage you to consider presenting a paper or poster session in keeping with the theme, "Frontiers of Soil Science: Technology and the Information Age" and to participate fully in the opportunities for collegial interactions the Congress will provide. The historic city of Philadelphia is a superb location for the WCSS, and the organizers are planning a series of local cultural tours and events for accompanying participants as well as an array of pre- and post-meeting scientific tours throughout the United States.

Won't you join me and colleagues from throughout the world in what promises to be a scientifically and culturally stimulating 18th WCSS?



Donald L. Sparks
IUSS President, 2002-2006

Program
The technical program will consist of plenary, symposia, and poster sessions organized within the framework of the IUSS scientific structure by Division, Commission, and Working Group officers.

- Plenary session (invited papers)
- Symposia sessions (invited and voluntary papers)
- Poster sessions (voluntary papers)

Related Activities
The Congress will provide many opportunities for participants to engage in scientific interchanges, conduct formal business, plan for Inter-congress meetings, and consider ways to advance the discipline of Soil Science through

- Working sessions of the IUSS Divisions, Commissions, Working Groups, Standing Committees, and Council Meetings
- Election of IUSS officers
- Scientific and Technical Exhibitions

Special Events
Known as the cradle of democracy, Philadelphia served as the U.S. capital from 1790-1800. The Declaration of Independence was adopted in Philadelphia, and the U.S. Constitution was written here. Philadelphia is home to Independence Hall, the Liberty Bell, and many other historical attractions. In addition to being one of America's most historic cities, it is rich in the arts and sciences, being home to the world renowned Philadelphia Museum of Art, the Rodin Museum, and the Pennsylvania Academy of the Fine Arts, the Franklin Institute Science Museum and The Academy of Natural Sciences.
Plans for the Congress include an opening reception and closing banquet as well as special events at scenic, historical, and cultural venues within the city that will give you the flavor of Philadelphia and interwoven cultures across the United States. You will all have opportunities to take advantage of the memorable music, art and history facilities within close proximity to the Convention Center and hotels.

Scientific and Cultural Attractions
Stimulating scientific and cultural tours within Philadelphia, the surrounding communities, Washington, D.C., Baltimore, New York, and across selected regions of the North America will include

- Pre- and post-Congress tours within North America, which will provide opportunities to examine soils of the Coastal Soils, Piedmont, Ridge & Valley, and other geologic provinces; to explore U.S. national parks; and to visit historic sites, such as Thomas Jefferson's home in Virginia, or Kitty Hawk, North Carolina, where the Wright Brothers first took flight.
- Mid-Congress tours and special activities for spouses, companions, and guests in and around

Philadelphia will include renowned museums and historic attractions, such as the Liberty Bell or Civil War battlefields.

Travel and Visas

Philadelphia is located only 50 miles from the Atlantic Ocean, about 100 miles south of New York City, and 120 miles north of Washington, D.C. International and domestic travel to and from Philadelphia is available from major airlines. Train service is also available to and from major cities on the U.S. East Coast.

Participants from most countries will require a visa to enter the United States to attend the Congress. To determine whether you will need a visa, see the information on the Visa Waiver Program on the U.S. Department of State's web site, http://travel.state.gov/visa_services.html. This page also gives helpful information on how to apply for a visa. Participants needing visas should apply at the nearest U.S. Embassy or Consulate as soon as it is logically feasible after their travel plans have been made (no later than three months before departure).

Additional information about the 2006 World Congress of Soil Science will be available at www.18wcss.org.

DIVISIONAL REPORTS

Division 1

Soils are among the most significant group of natural resources on earth and are important component of the environment. Farmers in Canada say "*The soil has nourished us as it nourishes trees, grasses. I am at home here, it is my homeland. I want to know more about it that I may live more intelligently and in harmony with my surroundings*" (Ransome, 1945). Division I main focus is to obtain better information on the nature, origin, and distribution of soil in three dimensional landscapes. A major paradigm shift is now taking place by changing the emphasis from the farm and farmer to the ecosystem or a unit of the ecosystem (watershed) in technological assistance and technology transfer activities. This does recognizes the fact that the farm is an integral part of the ecosystem.

In the last decades, the soil science culture has extended to many other fields in addition to agriculture including: a) cycling bio-geo-chemical, b) buffering the hydrological cycles, c) providing habitat for biota, and d) societal relevance (Yaaon and Arnold, 2000). The importance of soils as a life-support system and in the production of food and fiber was duly recognized (Yaalon, 2000). This is more or less the foundation of the new IUSS structure. In this regards all four Divisions need to give serious attention to integration as much as specialization.

Restriction of our study to the 1-2-m soil profile will isolate soils science from other associated sciences. To understand the complex soil system, soil scientists must go beyond this self-imposed limit to better understand the vertical and horizontal processes taking place on the landscape. We should look to deep ocean floor to establish the pattern of sediment transport from terrestrial environment with time (Mermut and Eswaran, 1997).

Recent international efforts on Global Climate Change and carbon cycles and sequestration require long term monitoring of natural resources, methodologies need to be developed and countries assisted in applying the techniques (Mermut and Eswaran, 1997). Land degradation, either natural or induced by humans is an important concern affecting the wealth of the nations. There is a greater need for land quality assessment and monitoring. Development of data bases and management systems, GIS and remote sensing are evolving, as well as simulation models which are based on soil data base.

Paleoepedology:We need to continue dealing with ancient and buried soils, as they provide information to reconstruct past climate and development of the landscape. A Paleoepedology

commission exists within *INQUA* since 1965. Within ISSS, a Working Group was established a few years later, having the same composition of officers as the INQUA Commission to ensure cooperation with and support from both Unions.
Pedometrics, which is the application of mathematical and statistical methods for the quantitative modeling of soils, with the purpose of analyzing its distribution, properties and behavior, has become a distinct area of research. The Working Group sees themselves under the "Provisional Commission on Pedometrics" of Division 1. The Division is the hierarchical supervisor of this provisional commission. At the Bangkok congress, the Working Group on Pedometrics organized symposium 48: "Developments in soil data processing". This included an oral session with 7 speakers and a poster session with 13 posters. The oral session was attended by some 85 to 100 people and the overall quality was of a high standard. The talks were diverse and the speakers came from a variety of geographical origins.
Soil micromorphology, although somewhat has lost its initial enthusiasm continue to be essential to provide essential information to both basic and applied aspect of soil science.

Website
We have opened a discussion on developing web-page for all the Commissions and link these to the IUSS web-page. Until they are established and linked to each other, the Division is currently using the IUSS website on the activities of the Divisions I and Commissions.

Activities
International Symposium on Sustainable Use and Management of Soils in Arid and Semiarid Regions. Cartagena, Murcia, SPAIN, 22nd-26th September, 2002. This was organized in conjunction with Division III. This symposium was part of the inter-congressional activities of the Division I "Soil in Space and Time" of the IUSS. The symposium was organized jointly by the Department of Agricultural Production of the Polytechnic University of Cartagena, together with the Department of Agricultural Chemistry, Geology, and Pedology of the University of Murcia. More than 250 delegates from about 20 countries have participated in the symposium.
The Local Organizing Committee has managed to publish two excellent volumes of the proceedings. The first volume was devoted to invited lectures and the second one was extended summary of all the oral and poster papers. These volumes can be obtained: Prof. Dr. Ángel Faz Cano, Secretary SUMASS2002, Department of Agricultural Production, The Polytechnic University of Cartagena; Paseo Alfonso XIII, 48. 30.203 Cartagena. Murcia. Email: sumass2002@upct.es Phone: 34-968 32 54 40; Fax: 34-968 32 54 35 Web Page: http://www.upct.es/sumass2002; http://www.um.es/sumass2002.
Oral and poster papers, up to a standard scientific level, will be reviewed published in the monograph series, Advances in Geoecology (probably No 37) by CATENA VERLAG, likely in late 2003.

International Seminar on Field Examination and Ecological Evaluation of Soils" The seminar will take place at the Leyte State University in Baybay, Leyte, Philippines. In addition to Martin Luther University, Soil Geography Commission of IUSSS, and Leyte State University as sponsors, the Philippine Society of Soil Sciecne and Technology (PSSST) has also expressed interest to co-sponsor the seminar which is now scheduled for April 21-24, 2003. As what is originally planned, the seminar will consist of 1 day lecture and 3 days field work. It is expected that many participants from various colleges and universities in the Philippines will participate this meeting.

Seventh International Conference on Development of Dry Lands Sustainable Development and Management of Dry Lands in the 21st Century: Under the Auspices of the International Dry Lands Development Commission (IDDC) and Hosted by The Ministry of

Jihad-e- Agriculture, the Islamic Republic of Iran Seventh International Conference on Development of Dry Lands: International Center for Agricultural Research in the Dry Areas (ICARDA) Tehran, Iran 14 - 17 September 2003.

8th International Meeting on Soils with Mediterranean Type of Climate: Soil Information, a Basis for Better Land Management and Prevention of Desertification in the Mediterranean Environment Marrakech-Morocco 29 September - 3 October 2003. The following subtopics will be addressed:

- Soils of arid zones of Mediterranean regions;
- Soil chemical, mineralogical, physical and biological properties and processes;
- Soil fertility and plant nutrition;
- Soil landscape relationships, genesis, classification and mapping;
- Soil degradation, desertification and soil-water conservation;
- Sustainable land use and management;
- Environmental impacts and soil quality indicators;
- Soil Information Systems, GIS and remote sensing;
- Soil information delivery and outreach.

International Conference on Innovativ Techniques in Soil Survey*"DEVELOPING THE FOUNDATION FOR A NEW GENERATION OF SOIL RESOURCE INVENTORIES AND THEIR UTILIZATION"* CHA-AM, THAILAND March 22-26, 2004**.** It is organized by Soil and Water Conservation Society of Thailand **and** Soil and Fertilizer Society of Thailand and co-sponsored by Land Development Department (LDD) Thailand USDA Natural Resources Conservation Service

Soil Classification 2004. August 3-11, 2004, Petrozavodsk, Russia. The conference will continue the discussion on soil classification iniciated in Hungary in 2001. The event will include Plenary session and the following oral and poster sessions:

1. The development of WRB,
2. The development of national soil classifications,
3. Anthropogenic soils classification,
4. Numerical and applied soil classifications,
5. Indigeneous soil classifications.

The meeting will be continued with a field workshop devoted to the problems of classification of Albeluvisols, Podzols, and Histosols. For details please see the web site http://biology.krc.karelia.ru/soil04/ and for further details contact kras@bio.krc.karelia.ru

EuroSoil 2004: EuroSoil 2004 in Freiburg/Germany, September 6 - 12, 2004
Conference has a total of 24 Symposia at least 7 Symposia are within the main field of the Division I and some colleagues of our division are involved. These are:

- Regionalisation of soil data,
- Forest soils,
- Desertification and salinization,
- Soil information systems,
- Mapping of soil associations,
- Significance of soil forming processes,
- Urban soils and land resources,

There will be also 4 Poster sessions one is entitled "Soils in time and space"
For further information contact http://www.forst.uni-freiburg.de/eurosoil/ .

International Working Meeting on Soil Micromoprhology September 20-26 2004 at the University of Cukurova Departments of Soil Science, Archaeometry, Ceramics and Engineering Geology Adana, Turkey.

Themes **of the meeting:**

1. Soil Quality Indicators for Agronomic Productivity; Environmental Studies,
2. Relationships Between Soil Fabric and Physical Behaviors of Soils,
3. 3. Soil Conservation for Sustainable Land Management,
4. Micromorphometry,
5. Soil Genesis and Weathering of Soil Minerals,
6. Experimental micropedology,
7. Use of micromorphology in Soil Classification,
8. Microscopy of Soil Behavior and Engineering,
9. Interactions Between Living Organisms, Organic, and Mineral Components,
10. Soil Micromorphology of Soils in Arid Regions,
11. Nomenclature, Data recording, Descripton, and Terminology,
12. Technical and Methodological Aspects of Soil Microscopy and Submicroscopy,
13. Paleopedology Indicators,
14. Role of Micromorphology in Other Sciences (Soil Hydraulics, Pedosedimentology, Geomorphology, Archaeology ,Ceramics, Archaeometry and Archaeoenvironments, Archaeological Sediments).

Contact Address: Dr. Selim Kapur: kapur76@hotmail.com

International Conference "Soil System Behaviour in Time as a Basis for Understanding of the Main Global Soil and Environmental Changes: Time Scales and Rates of Pedogenic Processes": With pre- and post-conference field trips Montecillo, Mexico, February-March 2005

Conference organisers:

International Union of Soil Science, Division I "Soil in Space and Time" La Sociedad Mexicana de la Ciencia del Suelo Colegio de Postgraduados, Montecillo. Instituto de Geología, Universidad Nacional Autónoma de México (UNAM),

Vertisols, Vertic and Compact Chernozems of the Temperate Climate: Genesis, Classification and Management (VVCCTC 2005) ***In memory of 100th anniversary of V. A. Kovda.***

At an IUSS Inter-Congress Meeting in Spain in September, 2002, a group of scientists with expertise in cool temperate Vertisols (Drs. Arshad, Kovda, Mermut, and Wilding) discussed the possibility of a workshop and field excursion in the southern part of Russia to examine the Vertisol/Chernozem interface. Such an IUSS activity seemed timely in view of the limited knowledge base of the extent, distribution, functionality, and quality of Vertisols in Russia, the Former Soviet States, and Europe. It would enhance the knowledge base, classification and interpretation of this important group of soils nationally, regionally and globally.

A 14-day pre-workshop sampling trip will be conducted in August 2004, to obtain the database for sites to be visited during the workshop. A guidebook will be developed incorporating this and other information germane to the sites that will be visited. The workshop is planned for September, 2005, in Krasnodar, southern Russia, in cooperation with Dokuchaev Soil Science Society, Institute of Geography, Moscow State University, Soil Institute MSU-RAS, and Kuban Agricultural University. Other co-sponsoring organizations will include the International Union of Soil Sciences, the IUSS International Working Group on World Reference Base, the European Soils Bureau, and the USDA-Natural Resources Conservation Service. A 10-12 day post-workshop field trip will be organized in Krasnodar and Stavropol regions, the major areas in southern Russia of vertic and compact Chernozems, and Vertisols.

Possible topics of the symposia would include: genesis and evolution, classification, chemistry and physics, mineralogy and micromorphology, pedogenic features, Chernozem/Vertisol interfaces, anthropogenic compaction, paleovertisols, agricultural and engineering problems, geologic/geomorphic/soil relationships, environmental and soil contamination issues, and limitations to sustainable use.
Additional information about the last two meetings will be provided in Philadelphia mid term meeting.

References

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Yaalon, D. H. 2000. Down to earth. Nature 407, Septemper, 301.

Yaalon, D. H. and Arnold, R. W. 2000. Attitudes towards the soils and their societal relevance: then and now. Soil Science 165: 5-12.

Prof. A. Mermut
Chair Division 1

Division 2

1.**General health of the Division, relationships with Commissions**.
Unfortunately, the relationships with Commission Officers of the Division have not been particularly intense. Recently I sent to all Div.II officers, Commission Chairs, Vice-Chairs and Secretaries, and Vice-Chair and Secretary of the Division) a copy of our Agenda in London asking them for information / ideas / inputs / comments / suggestions that I might bring to the attention of the IUSS Executive Committee (EC) and discuss in our meeting in London.
By mid March only four out of 14 of them have responded providing some inputs. Obviously, I have easier and more frequent interactions with the Chairmen of Comm.II.1. and II.2. who are Italians. No news till now with the other two Comm. Chairs, but the Vice-Chair of Comm.II.3. has responded.
Note: with this respect I believe that everybody is waiting for some clear indications from the EC on how to relate each other with which tasks and responsibilities, and so on.

2. **Activities since Bangkok and Activities planned for the future**.

(a) to possibly realize a series of four IUSS-Div.II-sponsored Books one for each Commission on Advances in Soil Physics, Soil Chemistry, Soil Biology, Soil Mineralogy. Alternatively a number of thematic Monographs by the 4 Commissions supervised by the Division.
(b) to start action for possibly include the international journal "Biology and Fertility of Soils" as an IUSS corresponding journal (proposed by Comm.II.3).
(c) to construct an Award for innovative research in Soil Chemistry (proposed by Comm.II.2).
(d) Official participation to the 2004-EUROSOIL Conference Comm.II.2).
(e) Italian candidature to host the successive EUROSOIL Conference with the official sponsorship of IUSS.
(f) Chair of Comm.II.2 is the Chairman of an Int. Workshop on "C sequestration and dynamics in agricultural soils" to be held in Nanjing, China, next 23-27 Ocotber 2003.

3.**Collaboration with other Divisions**.

(a) Comm.II.1. proposes collaboration with Comm. I.1. on the topic "Soil micromorphology and soil hydraulics" and Comms.III.4. and III.5. on the topic "Soil physical aspects of land degradation following human activities".

4. **Collaboration outside the Union**.

(a) An official proposal to IUSS for cosponsoring the 12th IHSS Int. Meeting to be held in Brazil in 2004 is being prepared by the President of the Int. Humic Substances Soc. (IHSS) and the Chairman of the Organizing Committee.
(b) Contacts are in course between the Chair of Comm.II.1. and the organizers of "Agroenviron 2004" Symposium to be held in Udine, Italy, to possibly include a session on "soil physical aspects of sustainable land management" with the official co-sponsorship of IUSS.

5. **Administrative matters**.

(a) The Vice-Chair of Div.II suggests an early discussion on the no. of Symposia, their timetable, afternoon sessions, Abstract submission deadline and other matters related to the next IUSS Congress to be held in Philadelphia.
(b) In any case I believe we have to discuss and define fixed procedures for several activities of IUSS, including relations between the Div. Committee and the Commissions, procedures to release the IUSS sponsorship to jointly organized Conferences, Workshops, etc. and their sessions, etc.

Prof. Nicola Senesi
Chair Division 2

Report IUSS Division 3

Introduction
The starting position of division is the following. Division 3 contains the former commissions IV - Soil fertility and plant nutrition unchanged and VI - Soil technology, now Soil engineering and technology of ISSS. Three commissions of IUSS did exist before more or less identical as one or two sub commissions of ISSS, so commission 3.1 Soil evaluation and land use planning as sub commission F - Land evaluation, commission 3.2 Soil and water conservation as sub com. G Soil and water conservation and A Salt effected soils., commission 3.5 Soil degradation control, remediation and reclamation as G Soil Remediation and working group LD Land degradation and desertification. To them working groups are linked. Table 1 summarizes this.
In part division 3 contains some old fields of applied soil science. (C3.3, C3.4). However table 1 shows also numerous sub commissions and working groups which indicate a strong dynamic in the fields concentrated in division 3. These fields are characterized by a certain degree of permeation of technique and socio - economy into soil science with both advantageous and adverse effects for soils. The centre of contemplation are soils, soil use and quality, change of soils by any and for any use.
Strong permeation of soil science by other fields will be also found in division 4. I suggest the centre of contemplation of division 4 will be the dependence of humans and their environment from soils.

1. Health of the division / Strategy of the division
Main attempts are on the level of commissions
- to establish links to previous commissions etc. of IUSS and their activities, members, and
- to find ways to gain financial and other resources.
In my end-year letter 2002 I asked all commission chairs of division 3 to discuss the objectives they believe to be important, and to concentrate on 2 or 3 of them to be pushed in the next years.
I asked them also to contribute to the problems of human living today as summarized on the summit of Johannesburg 2002
- water, -energy, -the close dependency of health and environment,
-agriculture and security of food supply, -species diversity.
The time until now was to short to have discussions and to gain conclusions from the commission chairs.

2. Activities since Bangkok Congress

3.1. – Discussion of the position of IUSS to technicians and farmers
- expectations of soil information user groups

3.3. - ASA meeting autumn 2002, responsible for the chair of A6 – International Agronomy with 6 symposia
- Soil and plant analysis, Cape Town, S. Africa, January 2003

3. Activities planned for the future

3.1. - 2004, mid-conference of commission 3.1
- a number of local meetings with Soil Science Societies research institutes, universities about some selected objectives. The target is to prepare a study of the important tasks for commission 3.1 and to enlarge representation of commission 3.1. Start already in Brazil.
- more activities will follow

3.2. - International salinity forum in Riverside, April 25-27, 2005, together with others.
- soil erosion activities will be fixed later

3.3. - Participation in the conference "Soils with a Mediterranean type of climate" (Sept. 29. – Oct. 3., 2003, Marakech, Marokko)
- planned Conference on soil lab managing in Taschkent/Samarkand, fall 2003

3.4. - Workshop on soil mechanical/hydrological interaction in arable and forest soils, Sept. 2004, previous to EUROSOL in Freiburg, Germany
- 2005 in discussion, workshop on salinization in India, not confirmed
- 2006 a conference with ISTRO in Kiel, Germany

3.5. - late 2004, mid time symposia in Asia on land degradation control, remediation and reclamation
- August 2003, workshop on environmental contaminants
- date not fixed: two workshops on sodic and salt affected soils, one in Australia and one either in Europe or South Africa

WG SU/SUITMA – July 7-11, 2003, Nancy , France
– 2nd Conference of "Soils of Urban, Industrial, Traffic and Mining Ares"
- not fixed in 2005, 3rd SUITMA-Conference
- Sept. 2003, EUROSOL, Symposium Urban Soil and land resources

4. Collaboration with other divisions

None until now

5. Collaboration outside the Union

Until now none. Will be build up in the next month to

- parallel organizations and
- customers of soil information, soil and land users

6. Administrative matters

- The commissions have the well known budged problems.
- An overview of previous activities and members of the Commission will be established.
- Integration of sub commissions and working groups in division 3.
- Webpage of division 3 will be established and linked to the IUSS webpage.

Prof. Wolfgang Burghardt
Chair Division 3

Division 4

1. Introduction

Division 4 gathers 5 Commissions: C 4.1: Soils and the Environment; C 4.2: Soils, Food Security, and Human Health; C 4.3: Soils and Land Use Change; C 4.4: Soil Education and Public Awareness and C 4.5: History, Philosophy and Sociology of Soil Science. We met at the ASA meeting in Indianapolis in November 2002 for a kick-off meeting and decided to give us missions and objectives. These texts will be posted on the web site of the division 4 that is being constructed.

We decided to focus our activity on "promoting interdisciplinary discussions between soil scientists, our colleagues in other scientific disciplines, policy-makers, and concerned citizens on the role of soils in sustaining society and the environment". This will be done at 3 levels. At the level of the division this will be achieved by organizing meetings where general topics linked to soils will be treated in an interdisciplinary manner. At the level of each commission this aim will be achieved by organizing more specific meetings. And finally we can be approached to identify appropriate persons for giving any necessary inputs, for instance in other ICSU bodies.

2. Activities since Bangkok

2.1 Interdisciplinary meetings

A meeting on organic phosphorus characterization and transformations in the environment has been organized in Ascona (Switzerland) from the 13th to the 18th of July 2003 gathering more 60 participants (soil scientists, agronomists, limnologists, ecologists, chemists etc) from all over the world. A book gathering contributions of the invited speakers, presenting the state-of-the-art and the research needs in this field will be published in 2004 by CABI. More information at: http://www.nwisrl.ars.usda.gov/OrganicP2003/PIntro.shtml

2.2 Commission meetings/activity

Commission 4.4

Mireille Dosso participated in organizing the meeting for Soil Education (“L’éducation au Sol” for AFES (Association Française pour l’Etude des Sol), in Paris in June 2003. The meeting was supported both by the French Academy of Agriculture and the Ministry of Ecology and Sustainable Development. Stephen Nortcliff (IUSS Secretary General), Pamela Hazelton (from IUSS C4.4), and Alain Ruellan (2nd Past President of IUSS) were invited to give talks

Commission 4.5

The book on the history of soil science has been the main effort of C 4.5 this year. It is proceeding as planned. The first papers will soon be sent out for peer - review. There are chapters on each of the Division 4 topics. A joint symposium of the C 4.5 and the SSSA S 205.1 took place in Indianapolis in Nov. 2002. It was entitled "Aspects of Soil Science History Philosophy and Sociology" and 7 papers were presented. Commission 4.5 is continuing to publish its Newsletter. No11 (2003) is being prepared by Hans van Baren.

2.3 Contributions to congresses beyond soil science

Officers of the Division 4 were present at the XIIworld Congress of the International Union of Food Science and Technology in Chicago from the 16th to the 20th July 2003. Lars Bergstrom (C 4.1) gave a talk entitled "The impact of food production on soils and groundwater resources with potential effects on human health" and Charle Rice (C 4.2) gave a talk entitled "The impact of food production on soil biodiversity: Designing sustainability". More information at: http://www.worldfoodscience.org/worldcongress/

Pam Hazelton (C 4.4) gave the keynote address at the Nature Conservation Council of New South Wales' Conference "Ancient Soils -New Solutions" in March 2003.

3. Coming Activities

3.1. Interdisciplinary meetings

Division 4 of IUSS and Divisions S-11 and S-5 of SSSA are co-sponsoring a symposium at the next American Society of Agronomy meeting in Denver entitled "Carbon Sequestration by Soils: A Global Perspective on the Underlying Science and Emerging National Policies". A volunteer poster session on carbon sequestration will follow the symposium. Invited speakers in the symposium include: Christian Feller IRD, CIRAD; David Powlson, IACR-Rothamsted; Keith Paustian, Colorado State University; and Carlos Monreal, Agriculture and Agri-Food Canada. More information at: http://www.asa-cssa-sssa.org/anmeet/ Commissions 4.4 and 4.5 will contribute to the symposium "Soil Education and Public Awareness" at the 2004 EUROSOIL that will take place from the 6th to the 12th of September 2004. More information at: http://www.forst.uni-freiburg.de/eurosoil/

3.2 Commission meetings/activity

Commission 4.4 and Division 4 support an international workshop organized by TORBA soil and society entitled "Soil Related Discords and Conflicts: Identification and understanding of human discords and conflicts related to soil use; their prevention, mitigation and management" that will take place in 2004. More information at: www.torba-soil-society.org

Commission 4.5 is participating in the organization of two technical sessions on the history of soil science being co-sponsored by the SSSA "Council on History, Philosophy and Sociology of Soil Science" that will take place at the next ASA meeting in Denver in November 2003. The first session will explore the approaches of the different disciplines contributing to soil geomorphology. The second session will accommodate volunteered papers on soil science history topics. An update on the status, of the joint SSSA/IUSS History of Soil Science Book project will be presented for information and discussion. More information at: http://www.asa-cssa-sssa.org/anmeet/

3.3 Contributions to congresses beyond soil science

Winfried Blum, Emmanuel Frossard and Benno Warkentin are preparing a half day symposium to be organized in the frame of the 32nd International Geological Congress that will take place in Florence (Italy) from the 20th to the 28th of August 2004. This symposium is entitled "Function of soils for human societies and the environment" and call for contributions will be launched soon. More information at: http://www.32igc.org/default1.htm

Prof. E. Frossard
Chair Division 4

UPCOMING MEETINGS

2003

6th International Symposium on Environmental Geochemistry

Edinburgh, Scotland, September 7-11, 2003.
Information:6th International Symposium on Environmental Geochemistry, c/o In Conference Ltd, Edingburgh EH1 3LY, UK; E-mail: info@in-conference.org.uk

Goldschmidt conference on geochemistry

Tokyo, Japan, 1-12 September, 2003
Information: Secretariat of Goldschmidt 2003, c/o International Communications Specialists, Inc. Sabo Kaikan-bekkan, 2-7-4, Hirakawa-cho, Chiyoda-ku, Tokyo 102-8646 Japan, Fax: +81-3-3263-7537; E-mail: gold2003@ics-inc.co.jp

Congress of the Polish Society of Soil Science & International Conference: Soil in the Environment

Krakow, Poland, September 9-12, 2003.
Information: Prof. dr hab. Stefan Skiba, Dr Andrzej Kacprzak, Zak ad Gleboznawstwa i Geografii Gleb IG UJ, ul. Grodzka 64, 31-044 Krak¢w, Poland; tel: +48-12-431-18-21, fax: +48-12-422-55-78; e-mail: kongres@grodzki.phils.uj.edu.pl ; website: http://www.geo.uj.edu.pl/soil.

Pedometrics 2003

The University of Reading, Reading, UK, 10-12 September 2003
Information: Dr M. Oliver, Department of Soil Science, The University of Reading, PO Box 233 Whiteknights, Reading RG6 6DW, UK. Fax +44 (0) 118378 6666; E-mail: M.A.Oliver@reading.ac.uk

8th Symposium on Biogeochemistry of Wetlands

Gent, Belgium, September 14-17, 2003.
Information: Saskia Vanderloven, Tel.: +32-9-264-60-01; Fax: +32-9-264-62-30; Saskia.Vanderlooven@rug.ac.be; Website: http://fltbwww.rug.ac.be/isofys

International Conference on Earth System Modelling

Hamburg, Germany, 15-19 September, 2003
Information: Annette Kirk, Conference Coordinator, Max-Planck-Institut für Meteorologie, Bundesstr. 55, D-20146 Hamburg, Germany. Fax +49 40 41173-366. E-mail: mpi-conference2003@dkrz.de

International Symposium on Sustainability of Dehesas, Montados and Other Agrosilvopastoral Systems

Cáceres, Spain, September 21-24, 2003.
Information: Dr. Susanne Schnabel, Dpto. de Geografía, Universidad de Extremadura, Avda, de la Universidad, 10071 Cáceres, Spain; Tel.: +34-927-257-000; Fax: +34-927-257-401; E-mail snadal@unex.es.

2nd International Symposium, Phosphorus Dynamics in the Soil-Plant Continuum

Perth, Western Australia, September 21-26, 2003.
Information: Prof. Z. Rengel, Dept. of Soil Science and Plant Nutrition, The University of Western Australia, 33 Stirling Highway, Crawley WA 6016, Australia. Email: zrengel@agric.uwa.edu.au. Internet:http://www.agric.uwa.edu.au/soils/welcome.html.

12th World Forestry Congress

Québec City, Québec, Canada, September 21-28, 2003; Information: Secretariat, Congrès forestier mondial 2003 World Forestry Congress, 800, Place d'Youville, 18th Floor, Québec,

Canada G1R 3P4; Tel.: +1-418-694-2424; +1-418-694-9922; E-mail: sec-gen@wfc2003.org; Webpage: http://www.wfc2003.org/

International Symposium "25 Years Assessment of Soil Erosion

Ghent, Belgium, September 22-26, 2003.

Information: Department of Soil Management and Soil Care, Ghent University, Coupure Links 653, B-9000 Ghent, Belgium; Phone: +32 9 264 60 36; Fax: +32 9 264 62 47; E-mail: erosion@soilman.rug.ac.be.

2nd International Conference on Soil Quality Evolution Mechanism and Sustainable Use of Soil Resources

Yingtan, Jiangxi Province, China, September 23-27, 2003.

Information: Xingxiang Wang, Fax: +86-25-3353590; E-mail: xxwang@issas.ac.cn.

XI World Water Congress: "Water Resources Management in the 21st Century

Madrid, Spain, October 5-9, 2003.

Information: Manuel Martín Antón, E-mail:wwater2003@cedex.es; http://www.cedex.es/iwracongress2003/en/hoja2_en.htm.

III Congreso Iberoamericano de Química y Física Ambiental (III CIQFA)

Tlaxcala, México, 6-10 Octubre 2003.

Información: III CIQFA, Miramar 54, Cumbria C.P. 54740, Cuautitlán Izcalli, México; Tel.: +52-(5)868-32-93; Fax: +52-(5)868-32-92; E-mail: lbrs@servidor.unam.mx o sicarubeu@hotmail.com; http://xochimilco.uam.mx/riqua

Mechanisms and regulation of organic matter stabilisation in soils

Munich, Germany, 5-8 October, 2003

Information: Karin Eusterhues, Lehrstuhl für Bodenkunde, Technische Universität München D-85350 Freising-Weihenstephan, Fax ++49-(0)8161-714466

E-mail: **som@wzw.tum.de**

Open Meeting of the Human Dimensions of Global Envir. Change Research Community

Montreal, Canada, October 16-18, 2003.

Information: Peter Brown, McGill School of Environment, 3534 University Street, Montreal, Quebec H3A 2A7, Canada; Tel.: +1-514-398-4306; +1-514-398-1643; E-mail: info.mse@mcgill.ca; http://www.mcgill.ca/mse/.

6th Conference of the Parties to the Convention to Combat Desertification: CCD COP-6

Bonn, Germany, October 19-30, 2003.

Information: Tel.: +49-228-815-2800; Fax: +49-228-815-2898/2899; E-mail: secretariat@unccd.int; http://www.unccd.int.

2004

International Meeting on Soils with Mediterranean Type of Climate

Marakech, Morocco, 9-11 February 2004

Information: SECRETARIAT OF THE 8th IMSMTC, Ecole Nationale d'Agriculture de Meknès, BP S/40, Meknès, 50000 Morocco, Fax: +212(0)55300238 E-mail: 8imsmtc@enameknes.ac.ma

International Conference on Innovative Techniques in Soil Survey

Cha-am, Thailand, 22-26 March, 2004

Information: Mr. Taweesak Vearasilp, Department of Land Development, Phaholyothin Road, Chatuchak, Bangkok, 10900, THAILAND. Fax: +66-2-579 1560, Email: vearasilp@access.inet.co.th

International Meeting: "Sustainable Agriculture on Tropical Steeplands
Merida, Venezuela, June 14-18, 2004.
Information: Fernando Delgado, Fax: +58-274-2441461; E-mail: delgado@cidiat.ing.ula.ve.

1st World Congress of Agroforestry
Orlando, USA, June 27-July 2, 2004.
Information: P.K. Nair, Fax: +1-352-392-9734; E-mail: pknair@ufl.edu; http://conference.ifas.ufl.edu/WCA/

6th International Symposium on "Plant Soil Interactions at Low pH'
Sendai, Japan, 1-5 August, 2004
Information: **Dr. Prof. Masahiko SAIGUSA,** Field Science Center, Graduate School of Agricultural Science, Tohoku University, Kawatabi, Naruko, Tamatsukuri, Miyagi 989-6711, JAPAN, Fax: +81-229-84-7364, E-mail: mailto:6thPSILPH@agri.tohoku.ac.jp

13th International Soil Conservation Organization Conference "Conserving soil and water for society: the social, environmental and economic challenge
Brisbane, Australia; 5-9 July 2004:
Information: Mike Grundy (President, ASSSI Queensland branch): mike.grundy@nrm.qld.gov.au

2nd International Conference and Field Workshop on Soil Classification 2004
Petrozavodsk, Russia, August 3-9, 2004.
Information: Mrs. Valeria Sidorova, Fax: +7-8142-789810; E-mail: sidorova@krc.karelia.ru.

32nd International Geological Congress
Florence, Italia, 20-28 August, 2004
Information: Chiara Manetti Borgo Albizi, 28 - 50121 Firenze – ITALY, Phone/Fax: +39 055 2382146, E-mail: casaitalia@geo.unifi.it

EuroScience Open Forum
Stockholm, Sweden, 25-28 August, 2004
Inbormation: gabriella.norlin@esof2004.org, tel: +46 8 546 44 154

EUROSOIL 2004, Freiburg, Germany, September 6-12, 2004.
Information: Dr. Thorsten Gaertig, Albert-Ludwigs Universitaet Freiburg, Institute for Soil Science and Forest Nutrition, Eurosoil 2004, 79085 Freiburg i. Br., Germany, Tel.: +49-(0)761/203-9144; Fax: +49(0)761/203-9144; E-mail: Thorsten.Gaertig@bodenkunde.uni-freiburg.de; http://www.forst.uni-freiburg.de/eurosoil

International Conference "Eco-Engineering – The Use of Vegetation to Improve Slope Stability
Thessaloniki, Greece, September 13-17, 2004.
Information: Sanna Dupuy, Laboratoire de Rhéologie du Bois de Bordeaux, Domaine de L'Hermitage, 69 route d'Arcachon, 33612 Cestas cedex, France; Tel.: +33-5-57-12-28-36; Fax: +33-5-56-68-07-13; E-mail: ecoconf@lrbb3.perroton.inra.fr; http://www.ecoslopes.com; http://lrbb3.pierroton.inra.fr.

International Meeting on Soil Micromorphology
Adana, Turkey, September 20-24, 2004.
Information: Prof.Dr. Selim Kapur, Dpt. of Soil Science and Archaeometry, University of Cukurova, Balcali, 01330 Adana, Turkey; Fax: +90-322-338-66-43; kapur@cu.edu.tr.

13th World Congress Clean Air & Environment
Salzburg, Austria, October 24-29, 2004.
Information: http://www.iuappa.fsnet.co.uk or iuappa@nsca.org.uk

2005

19th International Congress on Irrigation and Drainage (ICID)
Beijing, China, September 10-18, 2005.
Information: Chinese National Committee on Irrigation and Drainage, No. 20 West Chegongzhuang Road, Beijing 100044, China; Tel.:+86-10-6841-5522/6841-6506; E-mail: cncid@iwhr.com

IUFRO World Congress 2005
Brisbane, Australia, August 8-13, 2005.
Information: Russell J. Haines, Queensland Forestry Research Institute (QFRI), Australia, Tel.: +61-7-389-69-714; Fax: +61-7-389-69-628; E-mail: hainesr@gfri1.se2.dpi.gld.gov.au.

International Congress on Irrigation and Drainage (ICID)
Beijing, China, September 10-18, 2005.
Information: www.icid.org/index_e.html.

2006

18th World Congress of Soil Science
Philadelphia, USA , July 9-15, 2006,
Information:http://www7.nationalacademies.org/usnc-ss/WCSS_First_Announcement.html.

REPORT OF MEETINGS & NATIONAL SOCIETIES

SECOND PEDOLOGICAL DAYS IN SLOVAKIA
16-18 June 2003

After one year the Slovakian pedologists again met in the High Tatras, Stará Lesná, Congress Centrum ACADEMIA on June 16 – 18th, 2003. The meeting was second in the proposed annual meetings of Slovak scientists. Total number of participants - 98 included also the representatives from neighbouring countries (Czech Republic, Austria, Hungary and Poland).

Within four thematical cycles were discussed following topics:

- A role of soil in a new social-political and economic conditions
- Soils – progressive research methods, classification and assessment
- Soil in present environmental conditions
- Biomass production, its significance for soil,

with aspects to the resolutions from XVII th Soil Science World Congress, Bangkok and newly established Day of Desertification (June 17th).

Atmosphere at the meeting was highly creative. Main discussion topics were e.g. soil quality, classification, assessment, carbon sequestration, etc. Among very actual problems belonged also the problem soil – water. Forestry pedologists presented several actual problems from the region of forest husbandry in Slovakia. Within the excursion were visited three soil profiles in toe parts of the High Tatras slopes.

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NATIONAL CONFERENCE ON LAND DEGRADATION AND PROTECTION IN ALBANIA
Tirana, 22 – 23 April, 2003

On 22-23April, 2003 the Soil Research Institute, the Forest and Pasture Research Institute and the Soil Science Association of Albania organized, under the attention of the Ministry of Agriculture and Food and the Ministry of Environment, the National Conference "Land Degradation and Protection in Albania". The 120 participants in this Conference came from various research institutes, Agricultural University of Tirana, Academy of Sciences, representatives from the Ministry of Agriculture and Food, the Ministry of Environment, the Ministry of Territory Planning and Tourism, from Kosovo, IAM Bari – Italy, the Polytechnic University of Zurich – Switzerland and other Non-governmental organizations and foreign projects that operate in Albania, and discussed on the status of degradation and the alternatives of land protection in Albania.

In the opening speech Prof. Sherif Lushaj, Director of Soil Research Institute and at the same time President of Albanian Soil Science Association, presented the need for organization of this event in the conditions when many problems exist related to land degradation such as physical degradation, chemical degradation, soil and water erosion, forest cutting, gravel mining activity in the river channels, urbanization without criteria, over-grazing, etc.

The Minister of Agriculture and Food, Mr. Agron Duka, greeted the Conference and presented the priorities of the Albanian Government for land and territory protection from degradation. In addition, the Minister of Environment, Prof. Lufter Xhuveli, in his speech emphasized the need for amelioration of legislation and of the protection plan. The Deputy-Minister of Agriculture and Food, Prof. Vjollca Ibro, presented the need for a comprehensive evaluation of land resources. The Rector of Agricultural University of Tirana, Prof. Velesin Peçuli, emphasized the importance of coordination between different institutions for resolution of complex land related issues.

Thirty presentations were made in the Conference on physical degradation, chemical degradation, irrigation, watershed management, erosion, effects of deforestation, impact of forest cover on land protection, rehabilitation of vegetation, implementation of desertification convention, monitoring of soil fertility and pollution, forest cover and land degradation, etc.

In the two main presentations, respectively "Land Degradation problems, alternatives for protection and control" made by Prof. Dr. Sherif Lushaj, and "Sustainable Management of

forest-pasture eco-systems and Land Protection from degradation" made by Dr. Hajri Haska, Director of Forest and Pasture Institute, were made evident the major degradation problems, forests and pastures and the measures for protection of land eco-systems.

At the end of Day One of the Conference was discussed the draft strategy for land protection plan. In Day Two was organized a field trip along the Shkumbini River Valley, in which the participants discussed the evident problems in different areas, the negative effects of degradation, the alternatives for protection and best local practices for the sustainable management of land. The proceedings of this Conference were broadcasted by 7 TV stations, both public and private ones.

Prof. Dr. Sherif Lushaj
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President of Albanian Soil Science Association
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Golden Jubilee Congress of Soil Science Society of South Africa

The 24th Congress of the SSSSA was held from 20th-24th January 2003 in Stellenbosch, near Cape Town, South Africa. The Congress was in celebration of the
50th year of existence of the Soil Science Society of South Africa, and was marked by an introductory session on the opening day, looking at advances in various aspects of soil science in South Africa over the previous 25 years, as well as the challenges that lie ahead. This session was honoured by an opening address by past IUSS Secretary-General, Prof Winfried Blum.
The next day saw the start of the Congress proper, with keynote speakers including Dr Berman Hudson and Prof Keith Whigham, both from USA. The Congress was held in conjunction with the South African Crop Production and Horticulture Societies, meaning that there were over 400 delegates, as well as six parallel sessions from which to choose, covering all aspects of soil and environmental science. The fact that

these sessions were spread over three buildings on the campus of Stellenbosch University meant that some of the delegates who wanted to attend specific presentations left the Congress somewhat fitter than when they arrived!
The Congress culminated in a gala dinner on the last evening, when the SSSSA Gold Medal was presented to the ARC-Institute for Soil, Climate and Water for the completion of the South African Land Type Survey, meaning that for the first time, South Africa has 1:250 000 digital coverage of the soil, terrain and macroclimate resources of this diverse, fascinating country.
On the day following the Congress, a few intrepid pedologists from the WRB Working Group, along with some South African colleagues, gathered for a week-long field trip up the west coast of South Africa and into Namibia to look at some of the arid soils of this area. Despite the heat, and distances involved (Cape Town to Windhoek is 1500 km), the trip was fascinating and a great success.

Also at the Congress, the SSSSA elected its new Council for the next two years. They are:
President: Dr J F Eloff
Vice-President: Mr D G Paterson
Past-President: Prof L van Huyssteen
Secretary/Treasurer: Mr T E Dohse
Council Members: Prof R O Barnard, Dr J E Hoffmann, Dr L D van Rensburg, Mrs H G Janse van Rensburg
The address of the SSSSA is :
SSSSA, P O Box 65217, Erasmusrand 0165, SOUTH AFRICA, Tel: (+)27 12 310 2504 (Secretary); (+)27 12 310 2502 (President)
E-mail: theo@iscw.agric.za

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IRRIGATION AND DRAINAGE SYSTEMS RESEARCH AND DEVELOPMENT IN THE 21ST CENTURY - A JOINT ICID-EurAgEng WORLDWIDE INVESTIGATION

One critical problem confronting mankind today is how to manage the intensifying competition for water between expanding urban centres, traditional agricultural activities and in-stream water uses dictated by environmental concerns. In the agricultural sector, the prospects of increasing the cultivated area are limited by the dwindling number of economically attractive sites for irrigation and drainage projects. Therefore the required increase in agricultural production will necessarily rely largely on a more accurate estimation of crop water requirements on the one hand, and on major improvements in the construction, operation, management and performance of existing irrigation and drainage systems, on the other. The failings of present systems and the inability to sustainably exploit surface and groundwater resources can be attributed essentially to poor planning, design, system management and

development. This is partly due to the inability of engineers, planners and managers to adequately quantify the effects of irrigation and drainage projects on water resources and to use these effects as guidelines for improving technology, design and management.
To take full advantage of investments in agriculture, a major effort is required to modernize irrigation and drainage systems and to further develop appropriate management strategies compatible with the financial and socio-economic trends, and the environment. This calls for a holistic approach to irrigation and drainage management and monitoring so as to increase food production, conserve water, prevent soil salinization and waterlogging, and to protect the environment. This requires, among others, enhanced research and a variety of tools such as water control and regulation equipment, remote sensing, geographic information systems, decision support systems and models, as well as field survey and evaluation techniques.
In 1990 ICID made an urgent appeal to well-established International Organizations, such as the World Bank, to respond to the need for promoting research and development in irrigation and drainage, both in the developed and developing countries. Since then, many technology research programmes have been launched by different scientific, financial and professional Institutions. Their mission has been to enhance the standard of irrigation and drainage research and development, at worldwide level, with a view to improving technology and management so as to enhance system performance, food security and sustainability of the irrigation and drainage environment. In September 1995, EurAgEng, during the Meeting of the SIG on Soil and Water, held in Rome within the 46th ICID International Executive Council, agreed to join this enterprise. Since then ICID and EurAgEng committed themselves to working together in an endeavour to select priority issues that tackle the root cause of the major problems encountered in irrigation and drainage system development.
Particular attention was focused on:

- procedures for integrated planning and management of irrigation and drainage systems;
- analysis to identify causes and effects constraining irrigation and drainage system performance;
- research thrust and development;
- conjunctive use of surface and groundwater resources;
- technology for the design, construction, and modernization of irrigation and drainage systems;
- environmental impacts and suitable measures for creating and maintaining sustainability:
- institutional strengthening, proper financial assessment, capacity building, training and education.

The main findings and results of this cooperation have been recently published by the Authors in the ICID Journal: **Irrigation and Drainage** (Vol 51.4, 2002, pp 311-327) and are available on line in **Wiley InterScience** (www.interscience.wiley.com)

Bart Schultz
President Honorary of ICID
International Institute for Infrastructural Hydraulic and Environmental Engineering (IHE), Delft, The Netherlands.
Directorate-General for Public Works and Water, Utrecht, The Netherlands

Daniele De Wrachien
President of EurAgEng
Head of Department of Agricultural Hydraulics,
State University of Milan, Milan, Italy

Annual Meeting of the AOAC INTERNATIONAL PNW, Tacoma, USA

About 100 people participated in the AOAC INTERNATIONAL Pacific Northwest Section's Annual Meeting at the University of Puget Sound in Tacoma, Washington on June 26-27, 2003. The meeting format was conducive to the free exchange of ideas. We kept the same format of previous meetings with workshops held on Thursday afternoon and Friday morning, and training sessions on Friday afternoon. These workshops and training sessions gave local analysts an opportunity to share their knowledge and expertise.

The theme of the meeting was "*Producing reliable data in the laboratory*". Tantamount to obtaining reliable data is selecting an appropriate and reliable method. AOAC has been involved in producing an electronic compilation of analytical methods called e-CAM. This compilation will give laboratories the ability to search online for methods by category, analyte, matrix, instrumentation, and other parameters. In addition to allowing instant access to thousands of regulatory and other methods, it will be a storehouse and in-house review and validation system for method submissions. It will also be an interactive forum for method discussions where users may participate in discussion groups to post technical questions, notify users of new methods, organize collaborative studies, seek feedback of potential or obsolete methods, and resolve issues surrounding method use. Users will also find information on e-CAM on lab support services, including instruments, reagents, reference materials, analytical standards, contract services, and proficiency testing. Anita Mishra gave an excellent presentation on e-CAM at the plenary session and presented demonstrations.

Several papers were presented in the eight workshops following the plenary session (the names of the workshop organizers are given in parentheses): Inorganic Chemistry (Abbey Corbet and Sue Coffey), Laboratory Support Issues (Charles Lytle and Norma Corristan), Metals Chemistry (Katie Adams), Microbiology (Carlos Abeyta and Mike Grant), Pesticide Residue (Virginia Palomo and Steve Reimer), Pharmaceutical (Robert Tollefson), Seafood and Microanalytical (Jim Barnett) and Soil and Environmental Chemistry (Yash Kalra). There were three training sessions (the names of the presenters are given in parentheses): Introduction to OpenOffice (Ed Paski), Determination of Pathogens by Real-Time PCR Using SmartCycler (Jinxin Hu), and Everything You Wanted to Know About PCB Analysis (Bob Rieck). The Scientific Expo was a highlight involving productive interchange between vendors and delegates. Stephanie Clark, the banquet speaker, shared the story of Cougar Gold (Washington State University's signature cheese) and discussed the economics, science, and art of turning "abundant" grass into "precious" gold (Cougar Gold, that is!).

The Planning Committee consisted of Carlos Abeyta, Katie Adams, Enrico Buenaventura, Sue Coffey, Cheryl Ekland, Mike Grant, Jerry Hirsch, Yash Kalra, Peggy Knight, Virginia Palomo, Ed Paski, Josephine Pompey, Steve Pope, Steve Reimer, and Jim Silkey. The 2002-2003 executive consisted of President Sue Coffey, Past President Yash Kalra, President-Elect Carlos Abeyta, Secretary Josephine Pompey, and Treasurers Mike Grant and Fred Krick. Further information on the association is available from: AOAC INTERNATIONAL, 481 North Frederick Avenue, Suite 500, Gaithersburg, Maryland 20877-2417, USA, telephone (301) 924-7077 or (800) 379-2622 (toll-free from North America); fax (301) 924-7089; Internet: aoac@aoac.org. Special thanks to Brenda Wilson of Bon Accord Media for the construction of our website (www.aoacpacnw.com).

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International Agronomy Congress, New Delhi, India

The Second International Agronomy Congress was held at the Indian Agricultural Research Institute, New Delhi, India, November 26-30, 2002. The theme was "*Balancing food and environmental security - A continuing challenge*". The Congress was organized by the Indian Society of Agronomy, the Indian Council of Agricultural Research, and the National Academy of Agricultural Sciences. The sponsors were: The Indian Farmers Fertilizers Cooperative Ltd., Maharashtra Hybrid Seeds Company Ltd., Krishak Bharti Cooperative Ltd., International Center for Agricultural Research in the Dry Areas, Food and Agriculture Organization, Department of Science & Technology (Government of India), and the National Bank for Agriculture and Rural Development. Congratulatory messages were received from Hon. A.P.J. Abdul Kalam (President of India), Hon. Bhairon Singh Shekhawat (Vice-President of India), Hon. Atal Bihari Vajpayee (Prime Minister of India), Hon. Ajit Singh (Minister for Agriculture), Hon. Sukhdev Singh Dhindsa (Minister for Chemicals and Fertilizers), Hon. Parmod Mahajan (Minister of Parliamentary Affairs & Communications and Information Technology), Hon. K.C. Pant (Deputy Chairman, Planning Commission), Hon. T.R. Baalu (Minister for Environment and Forests), Hon. Arjun Charan Sethi (Minister of Water Resources), Hon. Sompal (Member, Planning Commission), Hon. R. Chidambaram (Principal Scientific Adviser to the Govt. of India), Dr. M.S. Swaminathan (UNESCO Cousteau Chair in Ecotechnology), Dr. Adel El-Beltagy (Director General, International Center for Agricultural Research in the Dry Areas, Aleppo, Syria), and Dr. Stein W. Bie (Director General, International Service for National Agricultural Research (ISNAR, Hague, Netherlands).

Dr. M. S. Swaminathan was the Chief Guest at the gala inaugural session. Eminent scientists and administrators in agriculture delivered special plenary lectures on topics related to food production and policy and farming systems research. Papers were presented in several sessions including partnership and participatory research, post-harvest technology, crop modelling and precision farming, integrated input management, information technology and agricultural research and development, water resources management, food and nutritional security, diversification and globalization of agriculture, and research-education-extension linkages. The sessions were well attended. State-of-the-art audio-visual equipment was available for the presentations. More than 900 poster papers presented on November 27-30 gave an opportunity for greater interaction with the authors, international networking, and making lasting friendships. I was impressed by the exhibition *"Natural resource management in India - A saga of success and challenges ahead"*. It was inaugurated by Hon. Murli Manohar Joshi, Minister of Science and Technology. An excellent cultural program was organized on November 28 for the delegates and the accompanying persons.

The following post-congress tours were organized: Golden Triangle Tour (Delhi-Agra-Jaipur-Delhi), Gangetic Tour (Delhi-Varanasi-Khajuraho-Agra-Jaipur-Delhi), Royal Rajasthan Tour (Delhi-Agra-Jaipur-Udaipur-Delhi), Spiritual Himalayas Tour (Delhi-Haridwar/Rishikesh-Mussoorie-Delhi), and South Indian Splendour Tour (Delhi-Bangalore-Hassan/Hampi-Mysore-Bangalore-Bombay). In addition, several delegates took the opportunity of visiting Taj Mahal (one of the seven wonders of the modern world), Jaipur (Pink City), the Tiger Reserve (the Corbett National Park) in the Kumaon Hills for a unique experience of Elephant Safari, the Keola Deo Ghana Bird Sanctuary in Bharatpur and many other historic places. For some of the foreign delegates and their families, it was a dream vacation.

The inaugural session was a gala event.

Hosting an international event of this magnitude requires a team effort, a lot of hard work, and commitment from many people. The Board of Governors included Ronald P. Cantrell (Philippines), Bob Clements (Australia), William D. Dar (India), Adel El-Beltagy (Syria), Ian Johnson (USA), R.S. Paroda (Uzbekistan), Timothy Reeves (Mexico), Frank Rijsberman (Sri Lanka), Panjab Singh, Chair (India), R.B. Singh (Thailand), and M.S. Swaminathan (India). The International Organizing Committee included I.P.S. Ahlawat (India), Bo Bengtsson (Sweden), Eric T. Craswell (Germany), S.K. De Datta (USA), R.C. Gautam (India), Y.P. Kalra (Canada), R.S. Kanwar (USA), Rattan Lal (USA), P.K.R. Nair (USA), A.H. Roy (USA), M.C. Saxena (Syria), Bal Ram Singh (Norway), Panjab Singh (India), Virendra Pal Singh (Philippines), and Neil C. Turner (Australia). The National Organizing Committee had the following members: I.P.S. Ahlawat, R.P.S. Ahlawat, Masood Ali, S.K. Bansal, V.M. Bhan, P.C. Bhatia, M.V. Dhoble, A.S. Faroda, N.C.Gautam, R.C. Gautam, J.S. Kolar, Virendra Kumar, I.C. Mahapatra, D.D. Malavia, R.K. Malik, R.S. Narang, S.P. Palaniappan, H.K. Pande, Rajendra Prasad, V.N. Rai, M.R. Sharma, S.H. Shinde, A.K. Singh, B.P. Singh, C.M. Singh, D.P. Singh, G.B. Singh, K.N. Singh, Panjab Singh, R.P. Singh, R.P. Singh (.....and no, it is not a misprint; there were two scientists named R.P. Singh), Ramendra Singh, Y. Singh, V.C. Srivastava, D.S. Yadav, and R.L. Yadav. The Core Committee included I.P.S. Ahlawat, R.C. Gautam, M. Prasad, P.K. Rai, J.S. Samra (Chair), J.P. Saxena, A.R. Sharma, G.C. Shrotriya, A.K. Singh, G.B. Singh, R.P. Singh, J.S.P. Yadav, and R.L. Yadav.

I congratulate Dr. Panjab Singh, Director General (Indian Council of Agricultural Research) & President of the Indian Society of Agronomy and his cohesive teams on organizing an excellent congress. The Indian hospitality was superb.

Yash P. Kalra,
Canadian Forest Service

International Conference on Sustainable Agriculture, Water Resources Development, and Earth Care Policies, New Delhi, India

The 2nd International Conference on Sustainable Agriculture, Water Resources Development and Earth Care Policies was held at the SCOPE Convention Centre, New Delhi, India on December 18-20, 2002. It was organized by the Bhoovigyan Vikas Foundation (An Earth Care Foundation) in collaboration with a number of organizations and was sponsored by several government and non-governmental agencies.

In his inaugural address, Hon. Professor Murli Manohar Joshi (Minister of Human Resource Development, Science, and Technology) emphasized that sustainable development was not possible without sustainable consumption. Prof. Sanjay Paswan (Minister of State, Information and Technology) welcomed the national and international delegates at the conference. Eminent scientists and administrators presented papers in five plenary sessions. Several invited and voluntary papers were presented in the following technical sessions:

(I) Sustainable agriculture and rural livelihood; Drinking water supply - A strategic policy approach; Sustainable development - Conserving earth's vitality and diversity; Biotechnology in developing countries - Economic, social and ethical challenges

(II) Sustainable agriculture - Ecosystems, production practices and relevance of traditional technologies in new millennium; Ground water potentials - Development and use; Population, carrying capacity, food security, and resource base; Bio-safety governance and policy reforms

(III) Sustainable agriculture - Natural resources management and adaptation to climate change; Irrigation and drainage - Sustainable planning, development, and management; new vistas and windows for achieving sustainable use of resources; Agro and rural industries; development strategies

(IV) Strategies for globalization of Indian agriculture - Agricultural marketing reforms, agribusiness methods, and agriclinic concepts; Blue revolution - A step towards 2nd green revolution in India; Regional development - Changing perspectives; Digital opportunities for sustainable agricultural development

(V) Renewable energy sources for sustainable agriculture; Biodiversity - Conservation and management; Policies for access, equity, and equality - Physical and human resources; Sustainable agricultural development - Role of Geomatics technology and knowledge management;

(VI) Sustainable livestock development in different farming systems - A strategic approach; Water and environment - A social good; Forest conservation and management, agro-forestry, planned use of wasteland, and degraded land; Agricultural resources information systems - A step towards informatics led agriculture in India;

(VII) Sustainable agriculture and rural development - Economic, social and political context, extension, and management; Integrated water resources development and management - Engineering, socio-economic, and environmental aspects; Urban environment and food security; Ecotechnology - Environmental sustainability, blending traditional knowledge with frontier technologies, and ecovillage network.

Bhoovigyan Ratna Awards were presented to Drs. G. S. Bhalla, D. K. Chadha, K. Kasturirangan, and N. C. Gautam. Bhoovigyan Leadership Awards were presented to Drs. M. Satish Kumar and A. Mohan. Prof. R. N. Dubey Memorial Award was given to Dr. R. S. Sangwan.

Hosting an international conference of this magnitude requires a commitment from many people. I congratulate Dr. K. Sundaram Chairman), Shri M. Moni (Secretary General), Dr. N. Vijayaditya (Chairman, Organizing Committee), and their committees on organizing a memorable conference. I am grateful to the Organizing Committee for giving me the opportunity to present a paper and to chair a plenary session. The unparalleled Indian hospitality was enjoyed by all participants.

Valedictory address by Hon. Bhairon Singh Shekhawat, Vice-President of India. Shri M. Moni (Secretary General), Hon. Sompal (Member, Planning Commission and Chairman, Conference Advisory Committee), Hon. Mohan Dharia (Former Deputy Chairman, Planning Commission), and Dr. K.V. Sundaram (Chairman) are seen in the picture (seated l to r).

The Bhoovigyan Vikas Foundation is a Consortium of Earth Sciences registered as a professional association in August 2000 at Nagpur under the Societies Registration Act 1860. It has been founded to bring together all earth science professionals to work towards the common goal of "**saving our planet**" through various activities designed to achieve sustainable development.

Send an email to bhoovigyan@rediffmail.com or moni@hub.nic.in or visit www.bhoovikas.nic.in to find out more.

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DO WE NEED AN EUROPEAN ASSOCIATION OF SOIL SCIENCE SOCIETIES (EASSS)?

For the first time, the European Union has launched a new initiative for soil protection, considering soils equivalent to air and water in the environmental context. At the moment, several initiatives are under way, in order to develop concepts on how soils in Europe can be protected and how soils can be used sustainably. Many members of European soil science societies are participating in this endeavour, contributing to its progress with their scientific knowledge and technical skills. Based on this new development, new initiatives are also taken, fostering research in all fields of soil science. But the question is, who should participate in this development and what is the visibility of soil science in the European context.

The idea was therefore to found a European Association of Soil Science Societies (EASSS), as a loose association under the umbrella of the International Union of Soil Sciences (IUSS), in order to create a partner for funding agencies and the different administrative institutions within the European Union and to take a mandate in soil protection and soil research in Europe. It is intended that a clear concept should be ready until the EUROSOIL Conference 2004 in Freiburg, Germany. Your comments would be most welcome and appreciated. Please send them to: winfried.blum@boku.ac.at

Winfried E.H. Blum
Austria

IN MEMORIAM

Professor Stéphane HENIN, 1910-2003

Stéphane Hénin passed away on the 4 June 2003 at the age of 92. His funeral took place at St Aubin-sur-Loire on 6 June 2003.

Stéphane Hénin has left his mark on Soil Science in France through his personality, the originality of his research and his capacity to detect talent. In his thesis in 1938, he set the basis of a series of studies on the structural stability of soils. In captivity in Germany during the 2nd World War, mixing with companions of all professions, he went further in his reflection on research and wrote a second thesis entitled "Method in Agronomy". Subsequently, he directed the Versailles Soil Laboratory then the Department of Agronomy and occupied the Chair of Agriculture at the Paris National Institute of Agronomy (INA-Paris). As member of the Academy of Agriculture, he also played a very important role in the Ministry of the Environment and in Agricultural Technical Institutes.

The broadness of his contributions and the richness of his research make him the true founder of agronomy and French soil science. His jubilee in 1989 testified to the diversity of his contributions and their innovatory nature. Up until last year, his mind had kept all its keenness, combining a thorough knowledge of soil science with an exceptional broadness of outlook on the major problems in society. His last contribution was the preparation of a session of the Academy of agriculture on the theory of chaos.

French Soil Science has lost a Master.

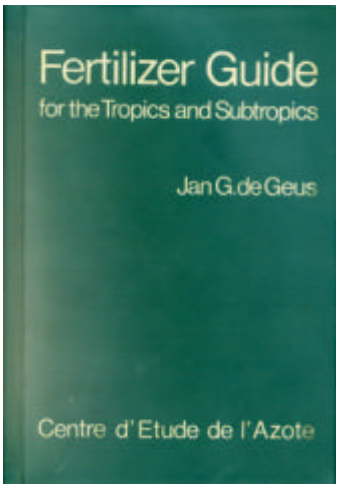
Daniel Tessier

Jan de Geus (1908-2003)

Ir Jan (Gijsbert) de Geus, who died on 10th June at the age of 95, had played an important role in the world of tropical agriculture, initially in Indonesia, but later throughout the tropics.

Jan was born on a farm in Bruchem in the river clay area in the central part of the Netherlands. He started his studies in Wageningen at the Agricultural University in 1928 and thoroughly enjoyed student life. He was lectured by Prof. J. van Baren and after 1933, by Prof. C.H. Edelman. Jan graduated in 1936 with a major in tropical plant science. In 1937 he was employed by a Dutch fertiliser company and sent to Dutch East Indies (Indonesia) where he became responsible for advising plantation companies on their inorganic fertiliser strategies. During this time he developed a strong interest in soil-plant relationships and the development of the plantation industry in West Java and other parts. Jan wrote many articles for the journal "De Bergcultures" on a variety of subjects and following the advice of Prof. Edelman he published a booklet on the Mountainous soils of West Java (Bergcultuurgronden op Java). The booklet was widely used for soil science courses to young planters. The focus of the book was on soil properties in relation to plantation crops (rubber, cocoa etc) and inorganic fertilisers. In the late 1930s little inorganic fertilisers were used which was related to the economic recession, the availability, as well as lack of knowledge on its effects. It was Jan's task to increase that use. In those years he felt, as he mentioned later in life, very much between a soil scientist and a planter.

During the war he spent some years in Japanese imprison camps and he was sent home to the Netherlands when the war had ended in 1945. He quickly recovered and went back to Indonesia when the first opportunity arose. Much had changed as compared to the period before the war and Jan was besides agronomic work also put in charge of commercial activities. "It is not what I wanted" he mentioned later "but I had no choice and after all I learned much from it". When the political situation in Indonesia changed Jan, returned to the Central office in The Hague where his working field was enlarged. Now he was in charge of the entire world and his first travels brought him to China and other Southeast Asian countries. The travelling fostered his interest for rice and resulted in the book "Means of increasing rice production" in 1954. In the decades that followed Jan travelled the entire tropical world and for most of the year he was on the road. His main duties were to encourage and sell inorganic fertilisers and he had the sensible combination of a practical scientist and some sort of a salesman. He also collected an enormous amount of information on fertiliser use and crop production.



The man ..... and his work

That information was used for his *magnum opus*: "Fertilizer guide for the tropics and subtropics". A 774-pages work that contains detailed information on fertiliser requirements of nearly all tropical crops. The work was based on Jan's collection of information from the research stations and contains more than 5000 references. The first edition was finished when he retired in 1967 and the second much larger edition, was finished in 1972. There is no recent book with so much detailed information about inorganic fertilisers and in many cases the "Guide" is still useful. It is also a very readable book. When I was soil surveying a remote oilpalm plantation in Tanzania in the late 1980s and had finished all my other literature, I started reading it and enjoyed it from cover to cover. I found hardly any errors and also much enjoyed the printing quality and pictures (compare this to any new soil science book and you see what I mean).

Jan's official retirement meant that he travelled less and more frequently visited scientific meetings in Wageningen and Amsterdam. He had an encyclopaedic knowledge on tropical agriculture which meant that he would sometimes interrupt an exciting young speaker talking about his research. Jan would mention that it had already been researched in the 1930s and if the speaker was interested he would send him the papers. He made a major contribution to a soil bibliography on Indonesia and Jan was also a weekly visitor at the Royal Tropical Institute (KIT) in Amsterdam where he browsed the library to keep him informed about developments in areas of interest. "It was in the 1960s" he mentioned some years back when we had lunch at KIT, "…that you would come across Prof. Mohr on the stairs and that you were not allowed to greet him as he would loose his concentration and fall. I am now in that position", he ended with laughter. Old age brought him discomfort but he kept interest and read the Wageningen University newsletters as well as the IUSS Bulletins.

There are many stories about Jan. Some years after he had started his studies he had a severe motor-accident. His leg was badly fractured and according to the surgeon in hospital it had to be surgically removed. "Never" he replied after which the surgeon said "But then you die". This was in the early 1930s and antibiotics had yet to be discovered. Jan refused to have his leg removed as he knew it would make him unsuitable for work in the Dutch East Indies. Jan has enjoyed all of his long-life but he frequently mentioned that his first period in Indonesia was his best.

He was a remarkable and very pleasant man with an enormous interest in world affairs until late age. With him Wageningen lost one of his early graduates. With him also the first generation died who advocated judicious fertiliser use in the tropics. Given the urgent need to increase food production to mitigate world hunger, inorganic fertilisers remain indispensable. Jan de Geus said that his entire life.

Alfred Hartemink
Wageningen

The Soil in Oral Culture: proverbs about soil and the land

by Yoseph N Araya

Without proverbs, the language would be but a skeleton without flesh, a body without a soul.
Ashanti proverb (Ghana)

Introduction

One of the distinctive features of human beings that separates them from the rest of the animal kingdom is that they do possess 'culture' i.e. a developed sense of knowledge, beliefs and expectations which is shared and inherited at various levels of their social organization, with regard their association with the environment they live in.

One good example of this cultural manifestation is the existence of vast amount of cultural references, through customs, religion, folklore about the land (or for that matter the soil), by virtue of its importance for food production (e.g. Yaalon, 2000; Lahmar et. al., 2001).

In this context, this article deals with a collection of traditional proverbs across different cultures and or countries and aims to look at the attitudes towards the soil. Mention is made on Examples of proverbs on those attitudes are given and mention made on the potential of proverbs for raising awareness about the soil.

What are proverbs and why ?

Simply defined a proverb[1] means 'a short sentence, usually in a figurative expression, expressing well known truths, social norms, or moral themes in common use by a society or social group'. Many proverbs are rooted in a country's ancient cultural heritage or religion. Others may have literary origin, as used by famous people, or may stem from memorable incidents in the past.

Proverbs are an essential part of the oral culture of a society, and are frequently used to define the environment and experiences of a particular society. As the soil, for that matter the land influences all aspects of life, it is a frequent subject of proverbs. Soil or land related proverbs can be found in almost all cultures. Understanding and sharing these will help to have an insight into the lives, values, and beliefs of the people who use it.

Moreover proverbs have proved to be a useful application for educative purposes especially i.e. as a vehicle for delivering important issues. One example of this is the AfriProverbs project (cited in the references section), where native African proverbs were collected and used to draw parallels to biblical teachings.

It has already been noted in the past (e.g. Gibbs, 2001) that the existence of similar kinds of proverbs in different languages suggests that some conceptions of intelligence and reasonable behaviour are to some degree universal. Thus sharing proverbs between different cultures will also help in developing some degree of universal appreciation and awareness towards 'super culture' and help in building cross-cultural dialogue for peace and security, as mentioned in UNESCO's Universal Declaration of Cultural Diversity, 2001.

The study

A collection of about sixty proverbs was done from oral, printed and web resources from as many as countries as possible, where mention of soil or earth or land is made. From this another 30 were selected by virtue of relevance and studied here.

[1] There have been numerous discussions on the definitions of what a proverb is and the concept of proverbiality, which is not intended to be discussed here. But readers may refer more authoritative articles by e.g. Mieder, 1999; Taylor, 1996c.d.e; Arora,1995; Gibbs; 2001.

Proverbs have been classified according to their communicative intention and the presence or absence of imagery or metaphor, which has been found useful for cross-cultural comparison as in Charteris-Black (1995).

In this context, the collected proverbs were grouped into four broad themes: the soil as a source and end of life; the soil as a universal reference; the value of the soil; and the duty to care for the soil. Those proverbs illustrating clear metaphoric use have been labelled with an asterisk (*).

This brief study is intended to show the potential use and is not free of limitations. The main limitation being, that the bulk of proverbs were obtained as translated in to the English language. This might have resulted in loss of style at its best and or in some cases possible alteration of meaning. But this is only one of the common problems of in the study of proverbs (More details in the problems faced refer Taylor, 1996a.)

Table 1. Summary Table of Collected Proverbs

Continent	Countries	Number of proverbs
Africa	6	7
Asia	5	6
Europe	10	12
Americas	3	3
Oceania	1	2
Total	*24*	*30*

Theme 1. The soil as a source and end of life

The soil has been considered as a sign of fertility and also as that of last exit of earthly life, as the following proverbs illustrate.

The earth is God's chief wife; she maintains the living and guards the dead. (Madagascar)
The earth (soil) makes us grow; the earth (soil) must eat us. (Basque, Spain)
All riches come from the earth (Armenia)
* Black soil produces white bread (Norway)
The earth produces all things and receives all again. (Spanish)
The earth offers you a grave everywhere (China)
You travel on until you return home; you live on until you return to earth. (Ethiopia)
The earth is a host who kills his guests. (Iran)
Six feet of earth make us all equal. (Italy)
As a child, is a man wrapped in his mother's womb; as an adult, in tradition; comes death, and he is wrapped in earth. (Malawi)

Theme 2. The soil as a universal reference point

A number of proverbs investigated also show, acceptance of the soil as a universal comparison point. Examples:

* The chameleon changes colour to match the earth, the earth doesn't change color to mach the chameleon. (Senegal)
Mother earth promised to tell her secrets to heaven. (Serbian)
One is born, one dies; the land grows. (Ethiopian)
The land is a mother than never dies (New Zealand).
The distance between heaven and earth is no greater than one thought (Mongolia).
In this world I greet my oldest survivor – the earth. (New Zealand)

The earth is man's only friend. (Bulgaria)

Theme 3. The value of the soil

Since early civilisation times, the soil has been used a basic object of remuneration, e.g. soldiers were rewarded in land as their pension. It was considered as a long-term investment, which runs beyond the lifetime of the owner.
Instead of a handful of gold, it is better to have a handful of earth. (Turkey)
What the soil gives, no one, not even the sultan can give. (Turkey)
Earth is dearer than gold (Estonia)
Better a ruined than a lost land. (Netherlands)
As you need to dismount off the mule of not your own, so shall you leave the land that doesn't belong to you. (Eritrea)

Theme 4: The duty to care for the soil

The duty to care for the soil has been highlighted with a number of proverbs, urging hard work and caution. With a similar note, outcomes of mismanagement or carelessness warned.
Some examples of duty:
* The earth is not thirsty for the blood of the warriors but for the sweat of man's labour. (Brazil)
While the sun is still up, let people work that the earth may live. (Hawaii)
We haven't inherited this land from our ancestors; rather we have borrowed it from our children. (Kenya)
We don't inherit the land from our ancestors; we borrow it from our children (USA)
All earthly goods, we have on loan. (Arabia)
But on the caution side, attention is called for lists,
Cheat the earth and the earth will cheat you. (China)
It is better to work in your own land than to count your money abroad. (Croatia)
* He who looks only at heaven may easily break his nose on earth. (Czech Republic)

Conclusion

Proverbs can be used to develop understanding of ones own and of others cultural heritage. This exchange of reciprocity will help develop cross cultural dialogue and appreciation on important topics. Further more, proverbs have a good potential for development of educational programmes in wise soil management, for raising awareness and participation.
Collaboration for more collections and analysis is gratefully welcomed.

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Some web resources:
http://www.afriprov.org/
http://www.bemorecreative.com/
http://www.spreekwoord.net/

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7. SOIL AND TILLAGE RESEARCH

incorporating SOIL TECHNOLOGY, journal concerned with applied research and field applications on soil physics, soil mechanics, soil erosion and conservation, soil pollution, soil restoration, drainage, irrigation and land evaluation. - Size: 5 volumes (10 issues) per year. - Publisher: Elsevier Science, Amsterdam, The Netherlands - Editors-in-Chief: Dr. M.R. Carter (Canada); Prof. Dr. M. Kutilek (Czech Republic); Dr. A.J. Franzluebbers (USA). - Webpage: http://www.elsevier.com/locate/still. Personal subscription rate for 2003 (volumes 70-74 - 10 issues) for IUSS members 100 EURO (including postage/handling)

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10. AUSTRALIAN JOURNAL OF SOIL RESEARCH

an international journal for the publication of soil research relating to primary production, land and water management, environmental pollution, and site remediation. Publisher: CSIRO Publishing, Melbourne, Australia. Chair of Editorial Advisory Committee: B Clothier (New

Zealand). Editors: J Fegent and S Banerjee. Web page: http://www.publish.csiro.au/journals/ajsr/ Personal subscription rate for IUSS members for 2003 (Volume 41, 8 issues, c. 1500 pages): US$105.00 (print and online--includes postage and handling), US$80.00 (online only).

NEW PUBLICATIONS

Land use, Erosion & Carbon Sequestration. International Colloquium in Agropolis Center, Montpellier, 3-28 September 2002. Abstracts.
This compilation of all abstracts of papers presented at the meeting has the following contents. Symposium 1: influence of erosion on carbon sequestration (4 key notes and 25 papers and posters); Symposium 2: land use, carbon sequestration & erosion (3 key notes and 50 papers and posters). Most papers will be published in full in the proceedings in the series Bulletin du Réseau Erosion, issues 22 and 23.
For further information, please contact Dr. Eric Roose, Directeur de Recherche en Pédologie, IRD-MOST, P.P. 64501, F-34394 Montpellier Cedex 5, France. Fax: +33-467416294. E-mail: roose@mpl.ird.fr.

Global Desertification: Do Humans Cause Deserts? Dahlem Workshop Reports 88. J.F. Reynolds and M. Stafford Smith, editors. Dahlem University Press, Berlin, 2002, xviii + 438 p. ISBN 3-934504-108. Hardcover.
Do humans cause deserts? Surprisingly, the answer to this question is contentious. Climate (particularly drought) is obviously a controlling influence, and it is equally certain that humans and their activities have caused desertification in some places. However, a great deal of disagreement exists as to the causes and extent of this land degradation, and consequently about how much of its impact on human well being is manageable. The resulting arguments create confusion in policies and management programs intended to help many of the world's poorest people, and have had a direct effect on the implementation of the United Nation's Convention to Combat Desertification. There is a complex of socio-economic and biophysical causal factors involved in land degradation that have differing levels of influence in different regions of the world at different times, and it links with other issues, such as vulnerability and poverty alleviation, in various ways. Failure of the scientific community to develop a consensus about this complexity has resulted in simplistic interpretations being passed on to practitioners and policy makers. Consequently, attempts to apply the same "solutions" to diverse problems has heightened the sense of confusion and led to a situation where there is not even agreement on the extent of desertification. A first step toward creating such a consensus was recently taken by a group of international researchers from a wide range of disciplines — ecology, atmospheric sciences, economics, social sciences, policy, and integrated assessment. Recognizing the need for novel interdisciplinary approaches to address the pressing global problem of desertification, they explored a new paradigm for a synthetic assessment framework beyond regional and disciplinary concerns, which is presented in this volume. The paradigm explicitly accommodates the various linkages between socio-economic and biophysical factors, as well as the fact that these linkages evolve over time in disparate ways and at different scales. It thus provides the basis for a new approach to assess the extent of desertification and to tailor appropriate solutions to the myriad of problems encompassed by that term.
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Vital Signs 2003. The Trends That Are Shaping Our Future. Worldwatch Institute. M. Renner, project director and M.O. Sheehan, associate project director, L. Starke, editor. In cooperation with the United Nations Environment Programme. W.W. Norton & Company, New York and London, 2003, 153 p. ISBN 0-393-32440-0. Softcover.
Although last year's growth of the world population of 1.18 percent was the lowest since rates peaked above 2 percent in the mid 1960s, the number of people added to the planet of 74 million remained in fact about the same. The human family has more than doubled since 1960. In 2002, global grain production declined for the third time in four years. At 1833 million tons the harvest was three percent lower than the previous year's and was the smallest crop since 1995. Global grain production per person dropped to 294 kg in 2002, the lowest level since 1970. According to FAO there are at least 815 million chronically hungry people in the world, a modest decline from the 956 million estimated in 1970. World cereal stocks fell sharply to some 466 million tons, nearly a 20 percent reduction in just one year and the lowest level in 40 years of stocktaking. These and many other figures are given in this interesting yearly publication from the Worldwatch Institute, since three years made in cooperation with the United Nations Environment Programme (UNEP). After an introductory chapter, it contains parts on Food Trends, Energy and Atmospheric Trends, Economic Trends, Transportation and Communication Trends, Health and Social Trends, Military Trends, Environment Features, Economy Features, Resource Economic Features, Health and Social Features, and Military and Governance Features. According to Worldwatch President, Mr. Christopher Flavin: "The human tragedies behind the statistics are compelling reminders that social and environmental progress are not luxuries that can be set aside when the world is experiencing economic and political problems". All data are also available on a CD-ROM. The publication is also available in many languages.
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Soil Conservation Service Curve Number (SCS-CN) Methodology. Water Science and Technology Library volume 42. S.K. Mishra and V.P. Singh. Kluwer Academic Publishers, Dordrecht, Boston, 2003, xx + 513 p. ISBN 1-4020-1132-6. Hardcover.
The Soil Conservation Service (SCS) curve number (CN) method is one of the most popular methods for computing the runoff volume of a rainstorm. It is popular because it is simple, easy to understand and apply, and stable, and accounts for most of the runoff producing watershed characteristics, such as soil type, land use, hydrologic conditions, and antecedent moisture conditions. The SCS-CN method was originally developed for its use on small agricultural watersheds and has since been extended and applied to rural, forest and urban watersheds. It has been applied to a wide range of environments and the method has received much attention in the hydrologic literature. Despite several limitations of the method and even questionable credibility at times, it has been in continuous use for the simple reason that it works fairly well at the field level. Recent contributions have significantly enhanced the understanding of the method and consequently its application potential. In the simplest form, the fundamental proportionality concept of the method relates the two orthogonal hydrological processes of surface water and ground water and the other hypothesis relates to the atmospheric process. Qualitatively, the method broadly integrates all the three major processes of the hydrologic cycle; and therefore it can form one of the fundamental concepts of hydrology. Thus, there is a need to have another look at the SCS-CN method and highlights its potential for applications to perform hydrological tasks other than those originally intended.
This textbook is aimed at presenting an up-to-date account of the SCS-CN method and clarifies its potential for practical applications.

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Soil Water Dynamics. A.W. Warrick.Oxford University Press, Oxford, New York, 2003, xxiii + 391p. ISBN 0-19-512605-X. Hardcover
This book is intended for use as a text in advanced soil physics or vadose zone hydrology, for use by university students and researchers and modelers interested in soil water flow, contaminant transport and environmental pollution abatement. The emphasis is on quantitative rather than qualitative descriptions. The basic framework and terminology address flow and transport, but the detailed descriptions are slanted toward mathematical development and analysis. More than 175 practice and discussion questions are presented. Additionally, computer programs are included, which appear on the accompanying CD along with some of the tabular data presented. Several short Mathcad programs have been used to illustrate and/or perform detailed calculations. The reader can reproduce similar results by whatever means are at his/her disposal, such as spreadsheets or programming languages. Additionally, there are a half dozen programs given in FORTRAN, primarily providing solutions to the nonlinear Richards' equation. These programs emphasize both the numerics and the physical results, and are simplified for ease of understanding. As a reference, this book develops the basic flow equations and provides the solutions and methodology under one cover. A unique feature is the presence of a number of analytical solutions for variably saturated flow and solute transport. These complement sections on numerical techniques. There are numerous examples and calculations which can de studied and, in some cases, applied directly. The author outlines also the differences of content with recent books on this subject.
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Soil Fertility and Crop Production. K.R. Krishna, editor. Science Publishers, Enfield and Plymouth, 2002, xv + 465 p. ISBN 1-57808-215-3. Hardcover.
This book starts with a review of salient historical facts relating to soil fertility research, including 20th Century discoveries, and their significance to present day global agriculture. The book covers, inter alia, mineralogical, physico-chemical transformations, acquisition by crops and agronomic aspects of soil nutrients. The soil fertility aspects of major, secondary and minor elements have been dealt with in detail. Some chapters cover subjects such as soil geography, soil organic matter, modeling and computer simulation, fertilizers and bio-inoculants, impact of soil fertility research programs in the Mediterranean agricultural zone, etc. A special feature of this book is the inclusion of chapters on the use of stable isotopes, crop breeding for tolerance to soil fertility constraints, nutrient dynamics in agro-ecosystems and satellite-based remote sensing methods in soil fertility research.
Price: USD 99.50; GBP 70.00.
Orders to: see below.

Soil Microbiology. Fourth edition of Soil Microorganisms and Plant Growth. N.S. Subba Rao. Science Publishers, Enfield, 1999, xiv + 407 p. ISBN 1-57808-070-3. Softcover.
Soil microbiology is relatively a new branch of soil science. There are few books dealing with microbiological activities, which have direct as well as indirect effects on the growth and well being of plants. This book discusses these subjects. It also outlines certain microbiological

activities in soil, especially biological nitrogen fixation, that are involved in nutrient absorption by plants. Thus, in a broad sense, this book would be useful to students of biology, microbiology and agriculture. This revised and updated edition incorporates some of the recent developments in the field, especially in the chapters on pesticides and on biotechnology in agriculture.
Price: USD 37.50; GBP 27.50.
Orders to: Science Publishers, P.O. Box 699, Enfield, NH 03748-699, USA. Fax: +1-603-632-5611. E-mail: sales@scipub.net. Homepage: www.scipub.net.

People Matter: Food Security and Soils. R. Lahmar, M. Held and L. Montanarella, editors. Torba, Montpellier, 2003, 158 p. ISBN 2-9519580-0-5. Softcover.
The international conference People Matter – Food Security and Soils took place in Tutzing, Germany, from 1-4 April 2001.
Food security is an urgent problem today. It is estimated that 800 million people have not enough food to survive and 2 billion people are lacking food security. To accommodate the nearly 8 billion people expected by 2025 and to improve their diets, the world will have to double food production compared to current levels. The intimate link between soil and food production is at the heart of human existence on earth. Issues such as environmental degradation, population growth, competition for land, overstressed agriculture and inadequate international food distribution raise some basic questions: the most important issues being: Do the soils of the world have the potential to feed all of humanity? Which kind of agriculture can feed this expected population? Are there alternatives? Are these forms of agriculture sustainable and what is their specific role in sustainable use of soils and land management? What could be the solutions to food insecurity? These and other issues were discussed at the meeting in Tutzing and the present publication contains its proceedings. After a preface by Prof. Alain Ruellan, former president of the IUSS and an introductory chapter by the editors, the publication contains chapters in the following sections: (I) Food security – starting point, approach and consequences (4 papers); (II) Sustainable food security – alternatives for agriculture (9 papers); and (III) Perspectives for sustained food security (2 papers).
Many soil scientists should read this interesting publication!
Price: EUR 12.00.
Orders to: Torba Soil & Society, 88 rue Jean-Baptiste Poquelin, F-34070 Montpellier, France. Fax: +33-467270465. E-mail: torba@torba-soil-society.org. Homepage:: www.torba-soil-society.org.

Weed Management Handbook, Ninth edition. R.E.L. Naylor, editor. Published for the British Crop Protection Council by Blackwell Science, Oxford, 2002, 464 p. ISBN 0-632-05732-7. Hardcover.
The 8th edition of this well-known book appeared in 1990, and many new ideas, information and understanding of weed management systems prompt this new edition. Furthermore, new weed management challenges are presenting themselves and need to be addressed. The material in this new edition has been fully rewritten and updated. The book section cover the principles of weed management, detail the weed control techniques currently being used, and describe various weeds in relation to individual crop groups. The handbook has the following contents: Descriptions of the biology of weeds, their diversity and population dynamics; In-depth coverage of herbicides, their discovery, patent information and legislation; Information on herbicide formulation, packaging, delivery, and method of application; Details on herbicide performance and resistance for various crops; Non-chemical weed management and biological control; aquatic weed management; Future directions for weed management. The sequence of chapters included reflects a progression from the biology of weeds, through the underpinning science and technology relating to weed management techniques including herbicides and their application to crops, leading to principles of weed management technologies. Finally a

set of relevant case studies describes the main management options available and addresses the challenges of reduced chemical options in many crops.
Price: USD 159.99: GBP 99.50.
Orders to: Iowa State Press, 2121 State Avenue, Ames, IA 50014-8300, USA. Fax: +1-515-292-3348. Homepage: www.iowastatepress.com. Or: Blackwell Publishing, UK Direct Sales, 108 Cowley Road, Oxford, OX4 1JF, UK. Fax: +44-1865-381273. Homepage: www.blackwellpublshing.com.

Engineering Properties of Soils and Rocks. Fourth edition. F.G. Bell. Blackwell Science, 2000, ix + 482 p. ISBN 0-632-05205-8. Hardcover.
Civil engineers, mining engineers and engineering geologists require a working knowledge of the engineering properties and behaviour of the different soil and rock types, and this is usually not provided in the standard texts on soil and rock mechanics.
This book provides extensive data on individual soil and rock types and deals in some depth with their composition, texture, degree of weathering and presence of fissures or discontinuities. It also considers the description and classification of soils and rocks. This fourth edition has been extensively revised and enlarged by fifty percent, with four new chapters. The book also considers properties in terms of construction materials and mentions methods of dealing with problem soils, groundwater etc. The book will be of particular interest to professionals in geotechnical and geological engineering and also to senior students in these fields.
Price: GBP 59.50.
Orders to: Marston Book Services, P.O. Box 269, Abington, Oxon OX14 4YN, UK. Fax: +44-1235-465555. In USA: Blackwell Science, Commerce Place, 350 Main Street, Malden, MA 02148-5018, USA. Fax: +1-781-388-8255. Homepage: www.blackwell-science.com.

Identifying and Classifying Local Indicators of Soil Quality. E. Barrios, M. Bekunda, R. Delve, A. Esilaba and J. Mowo. Centro Internacional de Agricultura (CIAT), 2001. ISBN 958-694-013-6.
The increasing interest in local soil knowledge is largely due to the realization that farmer communities that have been interacting with their soils for a long time can provide many insights into the sustainable management of tropical soils. A participatory approach, in the form of a methodological guide, has been developed and used in Latin America and Africa to identify and classify local indicators of soil quality related to permanent and modifiable soil properties. This methodological tool aims to empower local communities to better manage their soil resources through improved decision making and monitoring of their environment. It is also designed to steer soil management towards developing practical solutions to identified soil constraints and monitoring the impact of the management strategies implemented to address such constraints. The methodological approach presented here constitutes one tool to capture local demands and perceptions of soil constraints as an essential guide to relevant research and development activities. A significant component of this approach is the collaboration between technical officers and farmers to build an effective communication channel with each other. The participatory process also places considerable emphasis on consensus building among farmers to determine those soil-related constraints that should be tackled first. Such consensus is an important step toward collective action by farming communities if improved soil management strategies are to be adopted at a landscape scale.
Keywords: Soil fertility; Quality; Monitoring; Methods; Soil chemicophysical properties; Soil genesis; Decision making; Soil management; Natural resources; Resource management; Africa; Participatory research.
For scientific enquiries, please contact Dr. Edmundo Barrios at <e.barrios@cgiar.org>
The publication can be downloaded from the internet.
www.ciat.cgiar.org/downloads/pdf/isq_contents.pdf.

Soil Tillage in Agroecosystems. Advances in Agroecology volume 9. A. El Titi, editor. CRC Press, Boca Raton, London, 2003, x + 367 p. ISBN 0-8493-1228-0. Hardcover.

Soil management has the main feature of land use since humans settled the land and started to grow crops. In those prehistoric days, soil management objectives were simple: to sustain soil fertility and secure food productivity. The long evolutionary pathway that led to our modern world has teemed not only with inventions, discoveries and technological developments but also with theories and assumptions about handling agricultural soils that have not changed the paramount need for soil management in agricultural land use. On the contrary, emerging knowledge, in particular with regard to the environmental impacts of today's intensive production systems, has imposed further objectives for consideration. Soil erosion, nonpoint environmental pollution, and declining ecosystem stability have all been subjects of worldwide public concern, scientific input and political debate for many decades.

Soil tillage is, and will remain, the guiding component of soil management and consequently has far-reaching implications for agroecosystems. Understanding structures and functions of soil ecosystems under various tillage/no-tillage practices is an essential requirement for any future farming concepts. This book emphasizes these aspects in all 12 chapters, highlighting both the short- and long-term effects of soil cultivation practices on the soil ecosystem below and above the soil surface. The book offers a broad and comprehensive view of the interrelations of multifaceted tillage practices and the biological, chemical, and physical components of soil ecosystems. Tillage effects are highlighted within the context of the whole farming system to stress that these other components greatly affect the responses of tillage concepts in future farming system design aimed at maintaining resources, sustaining productivity and minimizing environmental pollution.

Price: USD 109.95; GBP 72.99.

Orders to: see below.

Agronomic Handbook. Management of Crops, Soils, and Their Fertility. J. Benton Jones, Jr. CRC Press, Boca Raton, London, 2003, xxviii + 450 p. ISBN 0-8493-0897-6. Hardcover.

Agronomy is defined as that "branch of agriculture that deals with the theory and practice of field crop production and soil management." This handbook contains information on the cultures of some of the world's major agronomic grain, oil, fiber, and sugar crops and provides data on the characteristics and management of these crops and the soils on which they are grown. The book is divided into multiple parts, each dealing with a specific aspect of agronomy: the major field crops; soils, their classification and characteristics; pH, liming and liming materials; fertilizers; mineral nutrition; diagnostic procedures for assessing the fertility status of soils and the nutrient element status of plants; and units and measures.

The appendices include a list of definitions, a glossary of botanical terms, data on nutrient requirements for major agronomic crops, a list of troublesome weeds, a key to nutrient deficiency symptoms of legumes, and a summary of the characteristics of the major elements and micronutrients.

Price: USD 99.95; GBP 66.99.

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Tropical Agroecosystems. Advances in Agroecology. J.H. Vandermeer, editor. CRC Press, Boca Raton, London, 2003, vi + 268 p. ISBN 0-8493-1581-6. Hardcover.

Tropical areas present ecological, cultural and political problems that demand analysis that is distinct from general ecological analysis. At a time when the sustainability of natural resource use in the tropics has become a big issue, this book provides a critical foundation for developing a sustainable agriculture component within this process.

Presenting a broad range of approaches to agroecosystem analysis, it addresses specific ecological issues associated with agricultural production. It examines two case studies of agricultural transformation and its effect on biodiversity and discusses key landscape

relationships between agroecosystems, wildlife, and human disease. The book presents a unique classification system for tropical agroecosystems; it discusses the possibilities and the limitations for Integrated Pest Management programs to protect crops in tropical agroecosystems; it examines the potential for using mycorrhizal biology to improve the sustainability of agroecosystems and provides two case studies on agricultural transformation and its effect on plant and animal diversity.
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Encyclopedia of Soil Science. R. Lal, editor. Marcel Dekker, New York and Basel, 2002, xxviii + 1476 p. ISBN print 0-8247-0634-X. Hardcover. ISBN electronic 0-8243-0518-1.
Together with 46 other topical editors and with contributions from over 400 scientists, the editor in chief, Prof. Rattan Lal, has succeeded to put together an encyclopedia with the state-of-the-knowledge in soil science. In about 350 entries of between 3 and 6 pages each, all aspects of soil science in a broad context are being treated. Larger subjects, e.g. organic matter and degradation, are subdivided into more entries. Each entry has the same sections with an introduction and, usually, conclusions, plus a list of references. Within the entries no references to other relevant entries are given. The user is referred to a practical index, which gives the article entry terms and many more entries within these articles. This very extensive reference covering all branches of soil science, from mineralogy and physics, to soil management and restoration, should be of interest to many students and a variety of scientists. An excellent book for the library, and, if you can afford it, for your personal bookshelf.
Price: USD 250.00 (print). For digital copy, see www.dekker.com.
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Soil Classification 2001. European Soil Bureau Research Report No. 7. E. Micheli, F.O. Nachtergaele, R.J.A. Jones and L. Montanarella, editors. Office for Official Publications of the European Communities, Luxembourg, 2002. ix + 248 p. EUR 20398 EN. Softcover.
Most modern soil classification systems were initiated in the middle of the last Century. Modifications made in many systems were based on validation, on developments in soil science in general, and on soil classification systems of other countries. An important step was made by the development of the World Reference Base for Soil Resources (WRB).
The dawn of the new millennium presents an opportunity to take stock of the status quo of soil classification, exchange ideas and information among the global community, and determine demands and challenges of the immediate future and re-evaluate the needs and roles of classification systems.
The papers comprising this publication were presented at an international symposium “Soil Classification 2001”, which was held in Velence, Hungary, in October 2001. The meeting was organized to discuss the following subjects: (1) new philosophies, concepts, and principles to enhance soil classification systems to better serve the users of information; (2) status of national, regional and international soil classification systems; (3) changes where specific weaknesses exist in current systems; (4) changing demands for information and the increased use of technology in the systems in the future; (5) information exchange and correlation between national systems. The book contains the following sections: Section 1: Review of basic concepts and principles for classification systems (3 papers); Section 2: Reports on

status of national classification systems (5 papers); Section 3: Future trends for soil classification (4 papers); Section 4: Special classification problems and reports (8 papers); Section 5: Correlation and harmonization of national systems: evaluation and testing of WRB; Section 6: New tools and techniques for soil mapping (3 papers).
Free copies are available by contacting Dr. Robert Jones, IES, European Soil Bureau, Joint Research Centre, TP 280, Ispra (VA), I-21020 Italy. Fax: +31-332-786394. E-mail: Robert.Jones@jrc.it.

Soil Terminology and Correlation. Second edition. P.V. Krasilnikov, compiler. S.A. Shoba, scientific editor. Karelian Research Centre of the Russian Academy of Sciences, Petrozavodsk, 2002, 293 p. ISBN 5-9274-0076-0. Softcover.
The main objective of the first Russian edition was to make a kind of manual for Russian scientists and students on world soil classification, since the texts of these classifications are not available in most Russian libraries. The second aim was to correlate national systems with the World Reference Base for soil Resources (WRB) terminology. The compiler has now published a book in English, in which national soil classification systems in use in twenty countries around the world are correlated with WRB. It also has a chapters on ethnopedology and folk soil classifications and on folk soil terminology. The last terms are also correlated with WRB whenever possible. This is a very practical publication, which deserves a wide circulation!
Price: USD 30.00, including postage.
Payment to: MJSCB "Vozrozhdeniye", Petrozavodsk Branch, Andropov Street 15, Petrozavodsk, Russia. Swift code VBNK RU MM. Beneficiary: Ms. Valeria Sidorova, account number 4230-1840-8039-0310-21120..Transfer documents have to be sent to: sidorova@krc.karelia.ru. For further information: Dr. Pavel Krasilnikov at kras@bio.krc.karelia.ru.

Stiinta Solului in Romania in Secolul al XX-Lea. (Soil Science in Romania in the 20th Century). N. Florea and M. Dumitru, editors. Editura Cartea Pentru Toti, Bucuresti, 2002, 316 p. ISBN 973-85917-0-8. Softcover. In Romanian, with English abstract of 33 pages).
The first information about different aspects of soils in Romania were published in the middle of the 19th century. More fundamental investigations began at the end of the 19th century, and were systematically organized in the beginning of the 20th century. The ideas of K.D. Glinka were applied in Romania as early as 1906, 8 years before the German translation of his Russian book. Gh. M. Murgoci, who was an Honorary Member of the ISSS, became head of the agrogeological department of the Geological Institute of Romania, which was established in 1906. He traveled widely in Western Europe, Russia and the USA, and contributed greatly to the development of soil science in Romania and the general concepts of pedology and soil. Murgoci can be regarded as the first soil scientist who proposed a soil classification system according to soil morphology and soil intrinsic properties. Early soil maps were published in 1909 in Odessa and Budapest and in 1927 at the First International Congress of Soil Science in Washington. The pedological researches developed very intensively and diversified after the second world war. Especially soil inventory mapping at several scales became prominent, especially of agricultural lands and forest lands. At present the whole country is mapped at a scale of 1 to 200,000, and the 50 maps published. In 1977 a system of soil quality monitoring started, in 1992 followed by an elaborated new integrated system for monitoring the quality of both the agricultural and forest soils, comprising the monitoring of 942 soil profiles.
The country possesses a soil profile database, and cooperates actively with the European Soil Bureau and other international institutions. The publication ends with an outlook on future activities.
Orders to: Institutul de Cercetari pentru Pedologie si Agrochimie, Bd. Marasti 61, 71331 Bucuresti, Romania.

Environmental Soil Chemistry. Second edition. D.L. Sparks. Academic Press, an imprint of Elsevier Science, Amsterdam, Boston, 2003, xiv + 352 p. ISBN 0-12-656446-9. Hardcover.
The first edition of this text was published 8 years ago and the advances in the subject of soil chemistry with respect to the environment necessitated a new edition. The book illustrates fundamental principles of soil chemistry with respect to environmental reactions between soils and other natural materials and heavy metals, pesticides, industrial contaminants, acid rain, and salts. Timely and comprehensive discussions of applications to real-world environmental concerns are a central focus of this text. Much attention is given to the use of synchrotron-based spectroscopic and microscopic techniques, which employ intense light. This new technique has revolutionized the field of environmental soil chemistry and allied fields, such as environmental chemistry, materials science and geochemistry. The intense light enables one to study chemical reactions and processes at molecular and smaller scales and in situ.
As the author, who is President of the International Union of Soil Sciences, states in his preface, this book is written at a time when scientific and lay communities "recognize that knowledge of environmental chemistry is fundamental in understanding and predicting the fate of pollutants in soils and waters, and in making sound decisions about remediation of contaminated soils." The book has the following chapters: Chapter 1: Environmental soil chemistry: an overview; Chapter 2: Inorganic soil components; Chapter 3: Chemistry of soil organic matter; Chapter 4: Soil solution-solid phase equilibria; Chapter 5: Sorption phenomena on soils; Chapter 6: Ion exchange processes; Chapter 7: Kinetics of soil chemical processes; Chapter 8: Redox chemistry of soils; Chapter 9: The chemistry of soil acidity; and Chapter 10: The chemistry of saline and sodic soils. The appendix shows the periodic table of the elements. The book has many many tables and figures, and lists for further reading.
Price: USD 49.95.
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The Advances in Agronomy Series. Academic Press, an imprint of Elsevier.
D.L. Sparks, editor.
This series continues to be recognized as a leading reference and a first-rate source of on-going research in agronomy. The reviews deal with issues of interest to agronomists and crop- and soil scientists. The following volumes appeared recently.

Volume 75, 2002, 251 p. ISBN 0-120-00793-2. Hardcover.
Four reviews dealing with phytoremediation; issues related to water use in China; humic substances; and remote sensing.
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Volume 76, 2002, 241 p. ISBN 0-120-00794-0. Hardcover.
Five reviews on tropical soil's ability to sequester carbon; crop/soil simulation models; interorganismal signaling in suboptimum environments; surface chemistry and function of microbial biofilms; and vegetable crop scheduling and prediction.
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Volume 77, 2002, 416 p. ISBN 0-120-00795-9. Hardcover.
Six reviews on controlled release fertilizers; breeding crops for increased nutritional value; bean plant architecture; carbon sequestration; grain legumes in water-limited environments; and the root zone water quality model.
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Volume 78, 2003, 290 p. ISBN 0-120-00796-7. Hardcover.

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Volume 79, 2003, 418 p. ISBN 0-120-00797-5. Hardcover.
Seven reviews about quality soils management; theory, measurement and application of 15N pool dilution techniques; distribution and management of seleniferous soils; arbuscular mycorrhizal fungi in sustainable cropping systems; usage of catch crops and green manures to manage nitrogen content; subterranean clover; breeding of rubber.
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Soil Water Repellency. Occurrences, Consequences, and Amelioration. C.J. Ritsema and L.W. Dekker, editors. Elsevier, Amsterdam, Boston, 2003, vi + 325 p. ISBN 0-444-51269-1. Hardcover.
It has become clear that soil water repellency is much more widespread than formerly thought. Water repellency has been reported in most continents of the world for varying land uses and climatic conditions. Soil water repellency often leads to severe run-off and erosion, rapid leaching of surface applied agrichemicals, and losses of water and nutrient availability for crops. At present, no optimum management strategies exist for these soils, focusing on minimizing environmental risks while maintaining crop production. The book starts with a historical overview of water repellency research, followed by seven thematic sections covering 26 chapters. The first section discusses the origin (2 papers); the second the assessment (3 papers); and the third the occurrence and hydrological implications of soil water repellency (10 papers). The fourth section is devoted to the effect of fire on repellency (2 papers); section five deals with the physics and modeling of flow and transport in these soils (5 papers); the sixth section presents amelioration techniques and farming strategies to combat soil water repellency (4 papers), while the last section has more than one thousand references of publications related to soil water repellency, and more than 200 related publications, the oldest reference is from 1805, the newest from 2001.
Price: USD 175.00; EUR 175.00.
Orders to: see below.

Nitrogen Fixation at the Millennium. G.F. Leigh, editor. Elsevier, Amsterdam, Boston, 2002, xiii + 455 p. ISBN 0-444-50965. Hardcover.
The turn of the millennium from the twentieth to the twenty-first century provides an occasion to review our understanding of a biological process, biological nitrogen fixation, that is of prime importance for the continued survival of mankind. This process has provided a basis for maintaining soil fertility since the beginning of organized agriculture, yet its very existence was confirmed only just over a century ago. In the intervening years, an enormous intellectual effort has dispersed much of the mystery surrounding biological nitrogen fixation. Biological fixation is widely exploited in agriculture, as are nitrogen fertilisers prepared for the last hundred years under extreme conditions of temperature and pressure. However, despite all our efforts, the fundamental nature of the reactions involved at the heart of the biological process remains unknown. This book aims to describe what we have learned in the last one hundred years or so about biological nitrogen fixation, about what its chemistry appears to be,

and how it is applied in agriculture. This ambitious objective has not been attempted recently. It is aimed at students and those who wish to enter these very challenging areas of research, and who need to learn the state of the art at the turn of the millennium. This book has the following chapters: 1. Nitrogen fixation - A general overview; 2. Nitrogenase structure; 3. Spectroscopy of nitrogenase; 4. The gene products of the nif regulon; 5. Use of short-chain alkynes to locate the nitrogenase catalytic site; 6. Regulation of Mo nitrogenases; 7. Actinorhizal symbioses; 8. Alternative nitrogenases 9. Advances towards the mechanism of nitrogenases; 10. A novel nitrogenase superoxide-dependent nitrogen fixation; 11. Dinitrogen chemistry; 12. Chemical models for nitrogenase; 13. Quantification of nitrogen fixation; 14. Nitrogen fixation and agricultural practice; and 15. Nitrogen fixation in rice.
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Soil, Fertilizer, and Plant Silicon Research in Japan. Jian Feng Ma and Eiichi Takahashi. Elsevier, Amsterdam, Boston, 2002, xi + 281 p. ISBN 0-444-51166-0. Hardcover.
Silicon (Si) plays a significant role in the resistance of plants to multiple stresses including biotic and abiotic stresses. Silicon is also the only element that does not damage plants when accumulated in excess. However, the contribution of Si to plant growth has been largely ignored due to its universal existence in the earth's crust. From numerous intensive studies on Si, initiated in Japan about 80 years ago, Japanese scientists realized that Si was important for the healthy growth of rice and for stability of rice production. In a worldwide first, silicon was recognized as a valuable fertilizer in Japan. The beneficial effects of Si on rice growth in particular, are largely attributable to the characteristics of a silica gel that is accumulated on the epidermal tissues in rice. These effects are expressed most clearly under high-density cultivation systems with heavy applications of nitrogen. Si is therefore recognized now as an ''agronomically essential element'' in Japan. Recently, Si has become globally important because it generates resistance in many plants to diseases and pests, and may contribute to reduced rates of application of pesticides and fungicides. Silicon is also now considered as an environment-friendly element. The achievements of Si research in Japan are introduced in this book, in relation to soils, fertilizers and plant nutrition. It has the following chapters: 1. Brief history of silicon research in Japan; 2. Silicon sources for agriculture; 3. Silicon in soil; 4. Effect of silicate fertilizer application on paddy rice; 5. Silicon-accumulating plants in the plant kingdom; 6. Silicon uptake and accumulation in plants; 7. Functions of silicon in plant growth; 8. Summary and prospect of silicon research; 9. Silicon research in the world. The appendix contains the Si concentration in 380 river waters, a survey in Si contents in flag leaf of rice plants, the content of Si and Ca in a large number of plants and the Si content of barley grain.
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Soil Carbon Sequestration for Improved Land Management. World Soil Resources Report 96. M. Robert. FAO, Rome, 2001, xv + 57 p. ISSN 0532-0488, ISBN 92-5-104690-5. Softcover.
In the framework of the Kyoto Protocol, carbon sequestration to mitigate the greenhouse effect in the terrestrial ecosystem has been an important subject of discussion in numerous international meetings and reports. The present synthesis focuses on the specific role that soils of tropical and dryland areas can play in carbon sequestration and on the land management strategies involved. A review is made of carbon dynamics and the fundamental role of organic matter in the soils. To increase carbon sequestration in soils in the dryland and tropical regions, as a contribution to global atmospheric CO2 mitigation, new strategies and

new practices in agriculture, pasture use and forestry, including conservation agriculture and agroforestry, are essential. Such practices should be facilitated particularly by the application of article 3.4 of the Kyoto Protocol or a similar provision in the post-Kyoto treaty covering the additional activities in agriculture and forestry in the developing countries and by appropriate policies, and should be widely promoted. Some proposals are made concerning good land management practices for croplands, pastures and agroforestry in order to promote carbon sequestration – a priority being their application to degraded lands. A method for monitoring and verifying the changes both in carbon sequestration and in the degree of degradation is proposed based on a soil-monitoring network.
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Capturing Carbon & Conserving Biodiversity. The Market Approach. I.R. Swingland, editor. Earthscan Publications, London and Sterling, 2003, xxiv + 368 p. ISBN 1-85383-951-5. Softcover.
As the ecological clock ticks, the failure of traditional forms of conservation to stop ecological devastation is all too clear. The new hope is that market-based approaches can reduce carbon emissions, save the planet from global warming, conserve biodiversity, create sustainable livelihoods and save money. Yet the critical question is: How do we do it? This publication makes a strong case for the maximum use of carbon sinks, particularly in the developing world. The diverse group of authors reveals in detail the benefits of a market-based system of reducing and sequestering carbon. Combined with emissions trading, this approach will maximize benefit to the rural poor and indigenous people, while promoting habitat preservation and biodiversity, watershed protection, and the mitigation of global warming. Such a strategy is the lowest cost approach, and the one most likely to succeed where central planning has failed. The authors move beyond theory to show how people can build a self-sustaining system by exploring the range of instruments available, and what can be achieved in the absence of undue regulation. This book is not only interesting reading for all involved in policy and business development, but also for persons involved in practical conservation and resource management.
The publication originates from contributions first published in the Philosophical Transactions of the Royal Society, Series A, in 2002.
Price: GBP 19.95; USD 32.50.
Orders to: Earthscan Publications, 120 Pentonville Road, London, N1 9JN, UK. Fax: +44-20-7278-1142. E-mail: earthinfo@earthscan.co.uk. Homepage: www.earthsan.co.uk. In US: Earthscan Publications, 22883 Quicksilver Drive, Sterling, VA 20166-2012, USA.

Soil Genesis and Classification. 5th edition. S.W. Buol, R.J. Southard, R.C. Graham and P.A. McDaniel. Iowa State Press, Ames, 2003, xvi + 494 p. ISBN 0-8138-2873-2. Hardcover.
The fourth edition of this well-known textbook, authored by S.W. Buol, F.D. Hole, R.J. McCracken and R.J. Southard, was published 6 years ago. This new edition retains its content by explaining the function and use of soils, soil formation and categorization, and detailing how this dynamic entity evolves from natural factors and processes and interfaces with ecosystems and human endeavors. This edition, dedicated to Francis Hole and Ralph McCracken, and their former teacher James Thorp, includes new nomenclature and systematic structure of soil classification categories, as well as new analytical techniques to more quantitatively identify soil properties and define class limits in Soil Taxonomy. About one-third of the textbook is dedicated to chapters about the eleven orders of Soil Taxonomy. Furthermore, it includes 82 pages with references. As in the earlier editions, it has many illustrative figures and some photographs, but only in black-and-white.

This comprehensive work covers the diverse needs of soil science instructors and students, and serves a a reference for soil scientists, agricultural and natural resources engineers, and those engaged in land use, planning and ecology.
Price: USD 79.99.
Orders to: see below.

Hydrology and the Management of Watersheds. Third edition. K.N. Brooks, P.F. Fflolliott, H.M. Gregersen and L.F. DeBano. Iowa State Press, Ames, 2003, xiii + 574 p. ISBN 0-8138-2985-2. Hardcover.
Based on feedback about the earlier editions, this third edition covers many upgrades and new chapters in the field of hydrology and the management of watersheds. The basic hydrology chapters cover updates and other changes in the field. The chapters on erosion and sediment yield include an expanded discussion of stream channel processes, morphology and classification. New chapters are devoted to water quality measurement, riparian management, wetland hydrology and management. A new, comprehensive chapter condenses and updates the previous edition's material on socioeconomic considerations. Throughout the text, many case studies are briefly discussed in boxes of up to one page. This textbook provides not only an introduction to hydrology and watershed management for students of natural resources, but is also useful overview for administrators, planners, managers and technicians dealing with the management and utilization of natural resources.
Price: USD 79.99.
Orders to: Iowa State Press, 2121 State Avenue, Ames, IA 50014-8300. Fax: +1-515-292-3348. Homepage: www.iowastatepress.com.

Spatial and Temporal Statistics. Sampling Field Soils and their Vegetation. GeoEcology Textbook D.R. Nielsen and O. Wendroth. Catena Verlag, Reiskirchen, 2003, 416 p. ISBN 3-923381-46-6. US-ISBN 1-59326-259-0. Softcover.
Many methods of statistical analysis are available for examining experimental data observed at different points in time and space relative to describing and understanding soil-plant-atmospheric processes within the landscape. For observations that are temporally or spatially independent, parametric and nonparametric statistical methods are available. For those that manifest temporal or spatial dependence, methods derived from regionally variable analysis and applied time series may be selected. Hence, the question arises, "How can these regionalized variable and applied time series theories frequently being used successfully in other scientific disciplines be applied to agricultural research?" This book is intended to introduce such concepts and theories to scientists already familiar with classical statistics and one or more disciplines of agricultural science. Each chapter introduces one concept and its application to several sets of field-measured data. Examples of data from various field studies are used as a frame for explaining basic concepts of spatial statistics and how to apply them within and between fields. The original data, the analysis and the interpretation are followed by a discussion of issues and concerns associated with the underlying assumptions of the analysis. The book has the following chapters: Review of descriptive statistics; Autocorrelation; Cross correlation; Semivariograms; Kriging: Crossvariograms and cokriging; Spectral analysis; Cross spectral analysis and coherency; Autoregressive and moving average functions; Autoregressive state-space analysis; Physical state-space models. At the end of each chapter, the reader can select references that comprehensively describe the theoretical basis of the concept and limitations of its application. The authors add "Like classical statistics, spatial and temporal statistical methods consist of tools only – no more, no less – and do not provide any miracle capable of replacing the ideas and creativity of the scientist."
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CA 95521, USA. Fax: +1-707-826-5835. E-mail: sle@axe.humboldt.edu. Homepage: www.catena-verlag.de.

Food security: Dynamics and dimensions. Mrityunjay Mohan Jha. Northern Book Centre, New Delhi, 2002, x + 158 p. ISBN 81-7211-137-1. Hardcover.
I had the opportunity of participating in the 2nd International Conference on Sustainable Agriculture, Water Resources Development and Earth Care Policies, New Delhi, India on December 18-20, 2002. One of the key components of the conference was the release of five books. Although all books were interesting, I am taking the liberty of writing the review on the book dealing with food security. The book discusses the relationship between population growth and food grain availability, poverty and accessibility to food, and ecology. In the Preface of the book, the author states that "The growing demand for food is increasingly undermining the base for future production and the resource base for agriculture is under pressure virtually everywhere". This well-organized book includes six chapters: Chapter 1. Food security: Concepts and issues; Chapter 2. Demographic trends and food-nutritional situation in Bangladesh; Chapter 3. Poverty syndrome, ecology, and health; Chapter 4. Food security system in Bangladesh; Chapter 5. Quest for relief and development - Politics of food aid; and Chapter 6. Population and food policy options. The text is supported by data presented in 34 tables and 10 figures. The author encourages readers to obtain information from several publications listed in the references at the end of each chapter and at the end of the book. There is a 5-page subject index. In his concluding remarks, the author presents challenges and opportunities in order to achieve food security. The publication brings the readers right up-to-date with current information and adds immense value to our understanding of food security. The type and layout have been well chosen for easy reading. The clear, easy-to-follow book will serve as an invaluable resource to individuals interested in food security. I am certainly pleased to have a copy on my bookshelf.
Price: USD 14.00, including airmail charges and handling.
Orders to: The Northern Book Centre, 421/1 Daryaganj, Ansari Road, New Delhi 110002, India. Phones: +91-11-3271626, 3264519. Fax: +91-11-3252651. E-mail: nbcnd@ndb.vsnl.net.in.

Yash P. Kalra, Canada

World Soil Resources. Map, prepared by FAO, Joint Research Centre, EC., and ISRIC, 2003. Scale: 1: 30 million.
This map, at an approximate scale of 1 to 30 million, in flat polar quartic projection, is made on the basis of the World Reference Base (WRB) Reference Groups, published in 1998 by FAO, ISRIC and IUSS. At the bottom of the map, measuring about 80 x 120 cm, the 30 Reference Groups are characterized in a few lines. The mapping units have usually one, sometimes two, or occasionally three Reference Groups. The map can be regarded as a successor to the map under the same name prepared by Prof. R. Dudal, published in 1993 by FAO as World Soil Resources Report 66, Revision 1. This map had an instructive and useful Explanatory Note of about 60 pages. Such an explanation is missing with the present publication.
Helpful is the CD-ROM Major Soils of the World, published in 2002 as FAO Land and Water Digital Media Series number 19, which contains much relevant information about the World Reference Base for Soil Resources. The CD has also more than 550 slides and pictures of soils, landscapes and other relevant information. As a set, this is excellent information for courses in ecology, soil science, and related sciences, and for those who are interested in the base of plant production.
Price of the map: EUR 15.00, plus mailing charges.
Orders to: ISRIC, P.O. Box 353, 6700 AJ Wageningen, The Netherlands. Fax: +31-317-471700. E-mail: jan.brussen@wur.nl. Homepage: www.isric.nl.

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Precision Agriculture. J. Stafford and A. Werner, editors. Wageningen Academic Publishers, Wageningen, 2003, 783 p. ISBN 9076998213. Softcover.
This publication, with its 115 peer-reviewed papers, forms the proceedings of the Fourth European Conference on Precision Agriculture, which was held in Berlin, in conjunction with the First European Conference on Precision Livestock Farming, mentioned in the next entry.
The book presents the latest scientific results from worldwide research, field studies and practical application. The papers focus on precision agriculture research containing interdisciplinary site analysis, integrative measures and management strategies as well as on practical applications. The economic and environmental effects of implementing the precision agriculture concept are featured in many of them.
Price: EUR 95.00; USD 115.00.
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Precision Livestock Farming. S. Cox, editor. Wageningen Academic Publishers, Wageningen, 2003, 183 p. ISBN 907698221. Softcover.
The 26 peer-reviewed papers in this book focus on physiological identification and monitoring of animals, on farm and in transit, and on the operation of automatic milking systems. Major objectives are secure methods of animal identification for trace ability, animal welfare and hygiene. The economic and health effects of implementing precision livestock husbandry are featured in many of them.
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Biotechnology in Sustainable Biodiversity and Food Security. B.N. Prasad, editor. Science Publishers, Enfield and Plymouth, 2003, xv + 186 p. ISBN 1-57808-268-4. Hardcover.
This book contains the papers presented at the International Conference on Biotechnology and Biodiversity, held at Katmandu in November 2000. In his foreword, Prof. M.S. Swaminathan states that “Modern biotechnology has placed in our hands very powerful tools for creating novel genetic combinations. Hence, we should master these technologies. At the same time, we should develop transparent and effective procedures for assessing risk and benefits.”
Although not directly written for soil scientists, this is an interesting publication on an intriguing subject, in which soil scientists certainly have a role to play.
Orders to: see below.

The Conservation and Improvement of Sloping Land. A Manual of Soil and Water Conservation and Soil Improvement on Sloping Land. P.J. Storey. Science Publishers, Enfield and Plymouth, 2002 and 2003.
This series consists of three volumes:

Volume 1: Practical Understanding, 2002, 336 p. ISBN 1-57808-201-3.
This is a comprehensive manual, which should provide a guide to anyone working in this field. Not only does it provide the reader with practical advice on how to carry out various conservation practices, but also the basic information that every fieldworker should have about soils, including their formation, chemistry, physical attributes and management. It also

provides information on related subjects, including vegetation, livestock management, surveying and approaches to extension.
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Volume 2: Practical Application: Soil Improvement, 2002, 262 p. ISBN 1-57808-250-1. Soil degradation is one of the most serious problems facing the world. It takes a number of forms of which soil erosion is one of the worst. The problem is particularly severe in developing countries. Even though there may be sufficient food being produced worldwide, many poor people - even in those countries that are exporting food - do not have enough money to purchase what they need, nor do they have the opportunity to find work outside agriculture. The only way that millions of people in developing countries can exist is by farming whatever land is available to them. For these people it is vital that the productivity of the land is not only maintained but also improved.
This book is recommended as a manual to rural development workers faced with the problems of land degradation in developing countries.
Price: USD 56.00.
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Volume 3. Practical Application: Soil and Water Conservation, 2003, 358 p. ISBN 1-57808-234-X.
This volume takes the subject of better land husbandry further. The book first points out the sort of things, which have been, and are being used, but are failing to deliver what is required. It then explains the causes of erosion, the theory and practice of soil and water conservation, and practical and lasting ways to construct terraces, including such details as how to build different kinds of terrace walls. Nothing grows from the top down, as also with soil improvement. It explains in detail the way of achieving practical and sustainable soil and water conservation, practical ways in which farmers can themselves make and use practical and lasting ways to construct terraces, including such details as how to build different kinds of terrace walls.
Price: USD 65.00.
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Management of Agricultural Drought. Agronomic and Generic Options. N.P. Saxena, editor. Science Publishers, Enfield and Plymouth, 2003, xii + 209 p. ISBN 1-57808-191-2. Hardcover.
Demand for food has been increasing consistently and exponentially over the last few years. The problem is becoming more acute, because it is concurrent with a reduced area of arable land for agriculture and an increase of crops grown on marginal soils. Among various stresses, drought is a major constraint to rainfed food crop production and it is estimated that about 3.7 billion hectares is affected by drought. This book takes a holistic approach to the understanding of, and suggests options for, alleviation of the problem of agricultural drought, beginning from a socio-economic perspective and then progressing to agronomic and genetic management options. Progress made in some legume crops has been documented, indicating that a sound foundation has been laid in the difficult area of crop drought research. Current knowledge and understanding on the subject, and case studies of various legume crops, have been presented. An overall synthesis of the current understanding on management of agricultural drought has been given in the last chapter, with suggestions for potential thrust areas of research and development.
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Orders to: Science Publishers, P.O. Box 699, Enfield, NH 03748, USA. E-mail: sales@scipub.net. Homepage: www.scipub.net. Or: Plymbridge Distributors, Estover, Plymouth PL6 7PY, UK. Fax: +44-1752-202331. E-mail: cservs@plymbridge.com.

Scaling Methods in Soil Physics. Y. Pachepsky, D.E. Radcliffe and H.M. Selim, editors. CRC Press, Boca Raton, London, 2003, 434 p. ISBN 0-8493-1374-0. Hardcover.

Soil physical properties are needed to understand and manage natural systems, spanning an extremely wide range of scales: from microbial habitats to root zone environments to field crop productivity to watershed processes to regional weather modeling and global circulation models. Capabilities of soil measurements at those scales are vastly different. This creates a fundamental problem for soil physicists and for users of soil physics data. Many soil data are obtained from small soil samples and cores, monoliths, or small field plots, yet the goal is to reconstruct soil physical properties across fields, watersheds and landforms, or to predict physical properties of pore surfaces and structure of pore space. The representation of processes and properties at a scale different from the one at which the observations and property measurements are made is a pervasive problem in soil physics, as well as in soil science in general. The multiscale characterization of processes and parameters of soil physics needs to be addressed as a research issue of scale dependencies in soil physical properties and as a practical/operational issue of data assimilation or data fusion in environmental monitoring and prediction. Any research of soil physical properties is made with specific support, extent and spacing. If those properties are to be used with different support, extent and spacing, scaling becomes necessary. Scaling is used as a noun to denote a relationship between soil physics data at different scales or as a verb to denote an action of relating such data on different scales. Two general approaches to scaling are represented in this book. One approach assumes that a physical model can be invoked or developed to perform scaling. The most prominent examples of this approach are fractal models and soil-landscape models. Another approach relies on establishing empirical scaling relationships from a large database. Both approaches have advantages and limitations. The authors of the contributions present the state of the art in addressing the fundamental scale-bridging problem and provide case studies crossing several levels of scale hierarchy. The book offers approaches based on geostatistics, artificial intelligence, wavelet transforms, fractal theory, soil-landscape relationships, computer simulations, and advances in theories of scale developed and tested to facilitate the use of soil physics data in a wide variety of soil/land/earth-related applications.

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Publishing in Soil Science. Historical developments and current trends. A.E. Hartemink. International Union of Soil Sciences, 2002, 268p. ISBN 90-6672-075-1. Softcover. With a foreword from Winfried E.H. Blum, Secretary-General of the IUSS.

For more than a century, the main focus of soil science was directed towards biomass production through agriculture and forestry, with the main goal to improve the understanding of the relationship between soil characteristics and plant growth. This focus has changed during the last decades, especially in the industrialized areas of the world. There, the main targets of soil science have developed towards environmental issues, mainly dealing with the protection of the environment and sustainable development, whereas in developing countries, soil science is still concentrating on the increase in food production and biomass in general.

These trends and the fact that relatively little has been written about historical trends and developments on the publishing of soil science or about how soil science is practiced in different parts of the world, brought the author to write a series of contributions in the Bulletin of the IUSS about these issues. The present publication contains these contributions, as well as four relevant papers from the author, who were published in journals. Also included

is the review paper: Trends and developments in soil science – 100 volumes of Geoderma (1967-2001), showing the important trends in Geoderma papers, that likely reflect some of the major changes that have occurred in soil science as a whole. The author of this valuable compilation is Deputy Secretary-General of the IUSS since 2002.
Price: EUR 17.50, including handling and surface mailing charges.
Orders to: Dr. A.E. Hartemink, IUSS/ISRIC, P.O. Box 353, 6700 AJ Wageningen, The Netherlands. Fax: +31-317-471700. E-mail: alfred.hartemink@wur.nl.

In-situ Characterization of Soils. K.R. Saxena and V.M. Sharma, editors. A.A. Balkema Publishers, Lisse, Abington, 2003, xv + 291 p. ISBN 90-5809-244-5. Hardcover.
For a long time soil investigations primarily depended upon collection of soil samples and for this various types of samplers were developed. It was found impractical to recover ideal undisturbed soil samples due to a various limitations like type of soil, thickness of soil samplers and transit problems of the samples to the laboratory. In-situ tests thus were found imperative to assess the nearly true characteristics of soils. Significant developments have taken place in the methods of in-situ testing of soils. The papers included in this book describe various in-situ tests, routine and soil-specific, being used in various countries. Characterization of soils and use of test parameters have been covered and describe the limitations due to geological or regional soil formations. In-situ characterization of soils by instrumentation, for ground improvement, creep studies under dynamic conditions have also been covered. The book opens new vistas of improvement in in-situ tests for soils, to suit certain specific soil-structure interaction and designed performance of structure. Certain tests, backed by case histories in soil mechanics, have been used for decades. This volume gives a rational, systematic and advanced meaning to these tests. A similar approach for collection of the case histories with newer techniques and sophisticated methods of analysis are suggested here.
Price: EUR 128.00; USD 140.80.
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World Agriculture: Towards 2015/2030. An FAO Perspective. J. Bruinsma, editor. Earthscan, published in cooperation with FAO, 2003, 444 p. ISBN 1-844070077.
Softcover.
This report is FAO's latest assessment of the long-term outlook for the world's food supplies, nutrition and agriculture. It presents the projections and main messages. The projections cover supply and demand for the major agricultural commodities and sectors, including fisheries and forestry. This analysis forms the basis for a more detailed examination of other factors, such as nutrition and undernourishment, and the implications for international trade. The report also investigates the implications of future supply and demand for the natural resource base and discusses how technology can contribute to more sustainable development.
One of the report's main findings is that, if no corrective action is taken, the target set by the World Food Summit in 1996 (that of halving the number of undernourished people by 2015) is not going to be met. Nothing short of a massive effort at improving
The overall development performance will free the developing world of its most pressing food insecurity problems. The progress made towards the target depends on many factors, not least of which are political will and the mobilization of additional resources. Past experience underlines the crucial role of agriculture in the developing process, particularly where the majority of the population still depends on this sector for employment and income.
Price: normal price GBP 35.00, online discounted price GBP 28.00.

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Fertilizer Indicators 2002. International Fertilizer Industry Association (IFA), Paris, 2003, 20 p.
This booklet with indicators gives an overview of the world of fertilizers and comprises explanatory texts, diagrams and selected statistics to illustrate fertilizer developments in different regions of the world. They provide information on capacities, resources, production, consumption and trade of fertilizers, certain important intermediates and raw materials. The development of fertilizer requirements by 2030 is also illustrated and environmental issues are given attention.
As well as available as a pocketsize booklet, the fertilizer indicators can be consulted at the IFA website at: www.fertilizer.org/statistics/indicators/summary.asp.
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Glossary of Fertilizer Terms. International Fertilizer Industry Association (IFA), Paris, 2002. CD-ROM.
The terms and expressions contained in this updated multilingual glossary – in French, English, German and Spanish – are include mainly on the basis of their importance in the field of fertilizer usage, with a few relating to soil science, fertilizer manufacture and analysis, application machinery and methods. In each language section the terms are arranged in alphabetical order, with a brief definition and cross references, whenever possible, to the nearest equivalent in the other languages. In some cases, however, no equivalent term exists, so that there is a different number of entries in the four sections.
The glossary can be consulted on internet at the IFA website www.fertilizer.org and is available as a CD-ROM.
Orders to: Information and Communications Service, IFA, 28, rue Marbeuf, F-75008 Paris, France. Fax: +33-1-53930545. E-mail: publications@fertilizer.org. Homepage: www.fertilizer.org .

War and Tropical Forests: Conservation in Areas of Armed Conflicts. S.V. Price, editor. Food Products Press, Binghamton, 2003, xviii + 219 p. ISBN 1-56022-099-6. Softcover. ISBN 1-56022-098-8. Hardcover.
Armed conflicts, and the political, economic, and humanitarian crises they provoke, may have severe impacts on tropical forests and the communities they sustain, and often lead to an unsustainable exploitation of forest resources and widespread habitat destruction. This has caused conservationists to reassess their efforts and adapt their strategies to a new set of responsibilities and urgent challenges. These challenges include preparing conservation programs and local communities for crises; maintaining conservation capacity during periods of conflict; addressing the underlying political and economic factors that fuel war; and developing the potential of conservation to help reduce the frequency, duration, and impact of violent conflicts. The eight chapters contained in this publication emerge from the papers presented at a conference, held on 31 March and 1 April 2000 at the Yale School of Forestry and Environmental Studies, New Haven.
The text is also published as Journal of Sustainable Forestry, volume 16, numbers 3 and 4 of 2003.
Price: USD 24.95, Softcover; USD 49.95, hardcover.
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Knowledge of the Land. Land resource information and its use in rural development. B. Dalal-Clayton and D. Dent. Oxford University Press, Oxford, New York, 2001, xviii + 428 p. ISBN 0-19-829601-0. Hardcover.

Planners and decision-makers today need to be in command of a broader range of tools and information then ever before. This book aims to show what is available in the way of natural resources information, and how it has been used (or not used) in planning and policymaking. For both methods and applications, the authors provide ample details for the reader to judge what data, skills, and procedures are required to meet their particular needs, and the references give guidance on where to find further information.

There has been a notable shift in planning and rural development over the past decade. Technocratic, top-down approaches are still very much in evidence, but there has been an explosion of participatory initiatives. Although many institutions still cling to sectoral thinking, there is growing recognition that sustainable development involves a balance of environmental, social and economic considerations. This balance requires an interdisciplinary approach to the survey of natural resources, and to the use of the information acquired, in land evaluation, planning, environmental impact assessment, and the preparation of coherent strategies and policies for development. Both the old ways and the new bring insights crucial to meeting these challenges. Both provide invaluable methods of work. By bringing together the standard methods of resource assessment and planning, and new thinking and emerging techniques, this book will help all practitioners to bridge the gap between the two. A sample of 9 pages is available in PDF at www.oup.co.uk/pdf/0-19-829601-0.pdf.

Price: GBP 65.00.

Orders to: see below.

Protecting the Ozone Layer. Science and Strategy. E.A. Parson. Oxford University Press, Oxford and New York, 2003, xvii + 377 p. ISBN 0-19-515549-1. Hardcover.

This book is the first comprehensive history of international efforts to protect the ozone layer, the greatest success yet achieved in managing human impacts on the global environment. Its arguments about how this success was achieved are both theoretically novel and of great significance for the management of other global problems, particularly global climate change. It is stated that the worldwide use of ozone depleting chemicals declined by nearly 95 percent within ten years. The book provides an account of the ozone depletion issues from the first attempts to develop international action in the 1970s to the mature functioning of the present international regime. It examines the parallel developments of politics and negotiations, scientific understanding and controversy, technological progress, and industry strategy that shaped the issue's developments and its effective management.

Although most of the effects of ozone depletion arise from increased surface UV, which can cause skin cancer, eye damage and suppressing the immune system, it can also reduce agricultural yields and disrupt terrestrial and aquatic ecosystems. As such, it is an interesting publication about the role of scientific assessments in science policy and environmental policy.

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Sustainable Agriculture. Second edition. J. Mason. Landlinks Press. CSIRO Publishing, 2003, 152 p. ISBN 0-643-06876-7. Softcover.

This book explains the concepts and long-term benefits of sustainability, using systems such as permaculture, biodynamics, organic farming, agroforestry, conservation tillage, and

integrated hydroculture. It also examines important issues such as monoculture versus polyculture, and problems such as land degradation, salinity and chemical waste.
Key chapters cover the utilization of hybrids and selection criteria for plants and stock and preparing a farm for droughts and floods. Information is provided to help design an integrated pest management system to preserve the productivity of crops, soils and livestock and to minimize the use of chemicals. The author has examined new strategies from around the world, including organics and systems for sustainable environmental management and reviewed a series of initiatives not mentioned in the first edition. Other areas examined include diversifying into farm tourism and value adding before selling produce.
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Orders to: CSIRO Publishing, see below. Or: EDS, 3 Henrietta Street, Covent Garden, London WC2E 8LU, UK. Fax: +44-20-7379-0609. E-mail: orders@edspubls.co.uk. Homepage: www.eurospanonline.com.

Soil Physical Measurement and Interpretation for Land Evaluation. Australian soil and land survey handbook series, volume 5. N. McKenzie, K. Coughlan and H. Creswell. CSIRO Publishing, 2002, ix + 379 p. ISBN 0-643-06767-1. Hardcover.
Soil physical measurements are essential for solving many natural resource management problems. However, it is well known that soil physical measurements in soil and land resource surveys are usually very deficient. This operational laboratory handbook provides a standard set of methods that are cost-effective and well suited to land resource surveys. The idea for this book was born more than a decade ago with the development of the Australian Soil and Land Survey Handbook Series, of which is this book the fifth volume. A workshop on soil physical measurements was held in 1995. It involved most of the contributors of the present volume as well as representatives of land resource survey agencies from around Australia. The resulting draft methods were widely circulated and many methods have been revised, tested and updated. The handbook provides guidance on estimation methods for physical properties across a range of soils, climates and land uses. It gives straightforward descriptions for each method that can be applied by people with a rudimentary knowledge of soil physics. It also presents valuable guidelines on the interpretation of the results and the integration with land resource assessment. After an introduction on land evaluation, the book then outlines procedures for field sampling. Twenty detailed chapters cover pore-space relations, water retention, hydraulic conductivity, water table depth, dispersion, aggregation, particle size, shrinkage, Atterberg limits and strength. The book includes soil physical properties from more readily available data and shows how soil physical data can be integrated into land planning and management decisions. This Handbook is written for Australian soils where it is common to encounter features such as clay-rich horizons, strongly weathered materials, shrink-swell clays, minimal organic matter, sodicity and salinity. In a general sense, Australian soils are comparable to those found in the other Gondwanan landscapes of Africa, India and South America, and it is in these regions that this Handbook should have greatest relevance. From a European perspective, a lot of useful, relevant information can be found in this well-produced publication!
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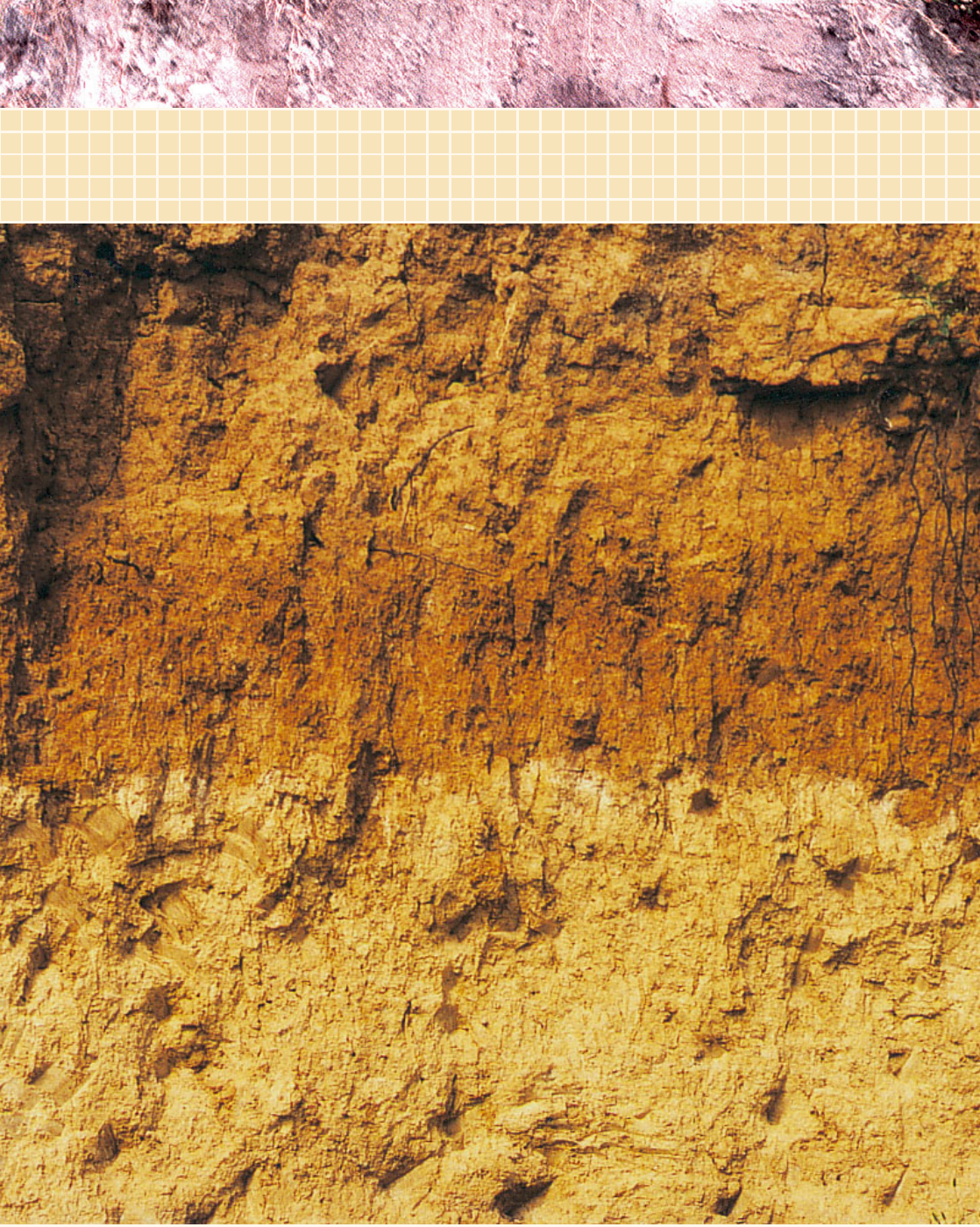

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