



bulletin

of the international society of soil science

bulletin

de l'association internationale de la science du sol

mitteilungen

der internationalen bodenkundlichen gesellschaft

**INTERNATIONAL SOCIETY OF SOIL SCIENCE
ASSOCIATION INTERNATIONALE DE LA SCIENCE DU SOL
INTERNATIONALE BODENKUNDLICHE GESELLSCHAFT**

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II. Soil chemistry/Chimie du sol/Bodenchemie

Dr. M. Schnitzer, Chemistry and Biology Research Institute, Agriculture Canada, C.E.F., Ottawa, Ontario K1A 0C6, Canada

III. Soil biology/Biologie du sol/Bodenbiologie

Prof. Dr. E. A. Paul, Dept. of Soil Science, Univ. of Saskatchewan, Saskatoon, Sask. S7N 0W0, Canada

IV. Soil fertility and plant nutrition/Fertilit  du sol et nutrition des plantes/Bodenfruchtbarkeit und Planzenern hrung

Dr. C. Hera, Academia de Stiinte Agric. si Silvice, Bd Marasti 61 Bucuresti, Romania

V. Soil genesis, classification and cartography/Gen se du sol, classification et cartographie/Bodengenetik, Klassifikation und Kartographie

Prof. Dr. E. Schlichting, Institut f r Bodenkunde und Standortslehre, Universit t Hohenheim, PF 106, D 7000, Stuttgart-70, BRD

VI. Soil technology/Technologie du sol/Bodentechnologie

Prof. Dr. C. Sys. Geologisch Instituut, RUG, Krijgslaan 271, 9000 Gent, Belgium

VII. Soil mineralogy/Min ralogie du sol/Bodenmineralogie

Prof. Dr. U. Schwertmann, Institut f r Bodenkunde, 8050 Freising- Weihenstephan, BRD



Season's Greetings
Meilleurs Voeux
Beste Glückwünsche

The Officers of the International Society of Soil Science
Le Bureau de l'Association Internationale de la Science du Sol
Der Vorstand der Internationalen Bodenkundlichen Gesellschaft

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FINAL ANNOUNCEMENT 12TH INTERNATIONAL CONGRESS OF SOIL SCIENCE, 1982

India invites you to the 12th International Congress of Soil Science. The Congress will be held at Vigyan Bhavan, Maulana Azad Road, New Delhi-India on February 8-16, 1982 and its theme is:

'MANAGING SOIL RESOURCES TO MEET CHALLENGE TO MANKIND'

India: The host country

India, the host country, and Delhi, the venue of the Congress, offers the visitor something special everywhere and in everything. Those seeking the footprints of history will find India a land where races and cultures have battled and blended, creating sublime achievements in art, architecture, religion, philosophy and science. It is rich in ancient history, temples, palaces, forts, wildlife and magnificent scenery. Endowed with towering snow covered mountains, rolling hills, lofty plateaus, large rivers, extensive plains, variety of soils and crops, India offers the greatest charm in its diversity.

Soils of India

India has almost all types of soils which are commonly met with in the tropical, sub-tropical, temperate, arid, semi-arid, humid and sub-humid climates.

The National Bureau of Soil Survey and Land Use Planning, Nagpur, has made extensive surveys, prepared soil maps, and classified the soils according to the U.S. Soil Taxonomy. The Bureau, with the active support of the Indian Council of Agricultural Research and the agricultural universities, will be bringing out a publication on the soil resources of India. Entisols (alluvial soil) in the Indo-Gangetic plains, Vertisols (black soil) and Alfisols (red soil) in peninsular India, and Ultisols and Oxisols (laterites) scattered over the southern and eastern parts of the country are the dominant soils. The mountain and the sub-montane regions of the Himalayas have a variety of temperate zone soils.

PROGRAM

Plenary sessions

Five keynote papers by specialists of international standing will focus attention on the management, problems and potentials of:

- Soil resources of the world
- Soils of arid zones
- Soils of semi-arid zones
- Soils of the rice-growing areas
- Soil policies (UNEP Supported Program)

Panel discussions on whither soil research

Three leading scientists from each Commission will present a critical analysis indicating how their specialized fields could contribute to a better understanding and utilization of soils.

Poster sessions

Authors intending to make presentation of voluntary papers in the poster sessions should indicate so while communicating the papers. The authors will be responsible for the preparation of the posters which should be readable from about 2 meters.

Symposia

Five in-depth symposia on the following topics will be organized. (Papers for the symposia are invitational and limited to 5 to 7 speakers for each topic.)

- Vertisols
- Submerged rice soils
- Organic manuring in the tropics and sub-tropics
- Non-symbiotic nitrogen fixation
- Desertification (UNEP Supported Program)

Commissions/Subcommissions (voluntary papers)

A number of contributory papers to different Commissions/Subcommissions will be presented in simultaneous sessions or joint sessions where necessary on themes which were announced earlier or on topics of general interest to all Commission and Subcommissions (Soil Physics; Soil Chemistry; Soil Biology and Soil Biochemistry; Soil Fertility and Plant Nutrition; Soil Genesis, Classification and Cartography; Soil Technology; Soil Mineralogy; Salt-affected Soils; Soil Micromorphology).

Working group discussions

These will be arranged on subjects of professional interest.

Exhibition

An exhibition of important Indian soils, books and scientific publications on soils and related scientific publications will be arranged.

General guidelines for submission and presentation of papers

- Only members of the ISSS are eligible for the presentation of papers.
- A participant can submit only one paper as first author and one additional paper as a junior author.
- Each paper should be accompanied by an abstract not exceeding 150 words in English, French and German (2 copies).
- The full text of the paper should be submitted along with abstract (2 copies) neatly typed in double space, before March 31, 1981.
- A total of 25 minutes which includes 10 minutes for discussions will be allowed for each paper.
- The Organizing Committee reserves the right to select and edit all submissions and abstracts and only approved papers will be authorized for presentation.
- The authors must register themselves by paying registration fee before April 20.

Transactions

It is proposed to publish all the invited papers in full, while for voluntary papers only the abstracts will be published and distributed free to the registered participants.

Post-Congress tours

In the six post-Congress tours, the participants will have ample opportunity of studying soils, their problems, and the researches relating to soil conservation, soil reclamation, soil fertility, soil and water management and agricultural production. Thus, soil scientists whether from developed or developing countries and with interests in any branch of soil science such as pedology, chemistry, physics, biology, fertility and plant nutrition, technology, microbiology, agronomy, and soil management will find something of interest to them. Included in tours are also places of interest to tourists. The tour costs indicated on pages 6 and 7 are for a single person sharing a double room and includes cost of board and lodging, the travel costs by air/road and guide books.

Special guidelines for tours

- Only a limited number of delegates can be accommodated in each tour. Intending participants should secure seats by payment of tour amount before the due date and indicating their preference in the Notice of Intent.
- All tours will commence from Delhi on Febr. 17, 1982 and will terminate at an international airport as indicated on pages 6 and 7.
- Tours ending up at Calcutta (Tour 4 & 5) or Bombay (Tour 3) will enable the participant to take the international flights for homeward journey from these airports and the participants are advised to make the necessary lodgings at the time of purchasing the ticket.
- Participants travelling with spouses/friends/relatives and desiring joint accommodation on tour should mention this specifically in the registration form.
- Participants having any food restrictions are requested to notify in advance.
- If adequate number of registrants are not available for any one of the tours, that tour will be cancelled.

Local tours in Delhi

These can be arranged at a notice of one day in advance. Approximate cost is US \$ 10 for a half-day and US \$ 20 for a full-day tour.

Tour to Agra (Taj Mahal)

One-day's return trip to Agra which is about 200 km from Delhi, can be arranged on a break day during the Congress, to visit the famous Taj Mahal and other historical places in and around Agra. The cost is approximately US \$ 75.

Visit to Srinagar (Kashmir)/Khatmandu (Nepal)/Colombo (Sri Lanka)

The participants interested in visiting Kashmir/Khatmandu/Colombo are advised to include a visit to any of these places as a part of their international ticket. This will enable a considerable saving. They are advised to contact the Air India agent in their countries. Alternatively, they can buy a separate ticket for any of these places from Delhi.

Program for accompanying spouses/persons

Programs like city sightseeing, shopping, cultural shows, fashion pageants, visit handicraft villages and cottage industries emporia, special tasting of Indian cuisine and demonstration of Yoga and herbal massage treatment etc., would be arranged during the Congress period and tickets for the purpose would be on sale.

Payments

- | | |
|---|------------------------|
| – Registration fee per participant (it entitles the participant to a copy of the transactions also) | US \$ 125 or 1Rs. 1000 |
| – Late registration fee after November 30, 1981 | US \$ 150 |
| – Registration fee for accompanying spouse | US \$ 50 |
| – Minimum deposit for hotel accommodation | US \$ 100 |
| – Minimum deposit for post-Congress tour | US \$ 100 |

(Note: Registration fee is neither refundable nor transferable)

The amount is payable in the form of bank draft drawn on State Bank of India, New Delhi in favour of the 12th International Congress of Soil Science and should be sent to The Secretary of the Congress. Please make separate draft for (i) Registration, (ii) Hotel deposit, and (iii) Post-Congress tours and send by registered airmail. (Personal cheques are not acceptable.)

Important deadlines

- Submission of Abstract along with full (voluntary) paper March 31, 1981*
(Final Date)
- Receipt of registration fee from all authors of papers April 20, 1981
- Final date for
 - (a) Notice of intent
 - (b) Receipt of registration fee from participants other than authors:
 - i) Without late fee July 1, 1981
 - ii) With late fee November 30, 1981
 - (c) Deposit for post-Congress tours February 7, 1982
 - (d) Reservation of accommodation November 30, 1981
 - (e) Cancellation of hotel reservation November 30, 1981

* The last date for invited papers has been communicated by the Chairman to the concerned authors.

Accommodation

With the help of India Tourism Development Corporation (ITDC) we have made block reservations for participants in the following hotels at Delhi. The prevailing tariffs for the single room/double room, breakfast, lunch and dinner are also indicated and are likely to rise by 20–40 percent by February 1982 (1 US \$ = 1 Rs. 7.50).

Name of Hotel	Accommodation/day		Meal Charges (approx)				
	Single Room (single occupancy)		Double Room (Two persons occupancy)		Break fast	Lunch	Dinner
Oberoï Intercontinental	Rs. 595	US \$ 80	Rs. 695	US \$ 93	Rs. Rates are higher than Hotel Ashoka		
Taj Mahal	550	73	650	87			
Ashoka Hotel	350	47	450	60	30	49	49
Akbar Hotel	275	37	350	47	28	45	45
Kanishk Hotel	250	33	325	43	26	39	39
Qutub Hotel	200	27	300	40	21	38	38
Hotel Janpath	165	22	265	35	26	39	39
Hotel Lodhi	140	19	210	28	20	34	34
Hotel Ranjit	125	17	185	25	20	34	34

The participants are requested to indicate their choice of three hotels in order of preference and the dates for which reservation of accommodation is desired, in the Final Notice of Intent. A minimum of US \$ 100 deposit for the hotel reservation is necessary. Due to tourists rush, the hotel management can not guarantee availability of accommodation unless the minimum deposit for it is received. Every participant will be responsible for clearing his accounts directly with the hotel. Organizers are responsible only for arranging accommodation at some concessional rates.

Pre-Congress Conference in the Philippines

The International Conference on Chemistry and World Food Supplies (CHEM-RAWN II) is being organized at Manila (Philippines) on February 2–6, 1982 in cooperation with ISSS and it will be of particular interest to soil chemists and soil fertility specialists. Interested participants should write to Dr. N. C. Brady, Director General, International Rice Research Institute (IRRI), P.O. Box 933, Manila, Philippines.

CALL FOR VOTING

At the request of twenty members, including the Chairman of the Committee-on-Rules, a minor change in the Rules of the Society is hereby put up for voting.

The proposal is to amend Rule H.11, so that it reads:

'Members interested in specific subjects may, with the permission of the Council, set up Working Groups to advise the Presidencies of the relevant Commissions on any topics they consider should be given special attention either at the Congresses or during the intervening periods.

When it is desired to set up a Working Group in the time between Congresses, the Secretary-General shall obtain the approval of the Executive Committee and the Chairmen of the relevant Commissions by correspondence.

The Working Group may also carry on special correspondence and exchange of information within the field of the special subject. The Chairman of any such Working Groups shall be nominated by the President(s) of the Commissions(s) involved.'

APPEL AU VOTE

A la demande de vingt membres y compris le Président du Comité du Règlement, un changement mineur au règlement de l'Association est soumis à un scrutin.

La proposition concerne la modification de la Règle H.11, en sorte qu'elle se lit:

'Les membres s'intéressant à des sujets spéciaux peuvent, avec le consentement du Conseil, créer des Groupes de Travail pour donner aux Bureaux des Commissions en question des avis concernant des thèmes qui, d'après eux, méritent une attention spéciale, soit pendant le Congrès, soit pendant les périodes intermédiaires.

Quand on désire de créer un Groupe de Travail dans l'intervalle des Congrès, le Secrétaire Général doit obtenir la permission du Comité Exécutif et les Présidents des Commissions rélevants par correspondance.

Les Groupes de Travail peuvent également entretenir une correspondance spéciale et échanger des informations dans le domaine de ces thèmes spéciaux. Le Président d'un tel Groupe de Travail sera désigné par le(s) Président(s) de la (des) Commission(s) intéressée(s).'

AUFFORDERUNG ZU STIMMABGABE

(umstehend)



In favour of amending Rule H.11

En faveur de la modification de la Règle H.11

Zugunsten die Abänderung der Satzung H.11

☐

Against amending Rule H.11

Contre la modification de la Règle H.11

Gegen die Abänderung der Satzung H.11

☐

Please send to/Veuillez envoyer à/Bitte senden Sie an: Secretary-General ISSS,
P.O. Box 353, 6700 AJ Wageningen, The Netherlands.

AUFFORDERUNG ZU STIMMABGABE

Auf Vorschlag von zwanzig Mitglieder, einschliesslich dem Vorsitzenden des Satzungs Komitees, werde eine kleine Änderung in der Satzung der Gesellschaft vorgelegt zur Abstimmung.

Es wird vorgeschlagen die Satzung H.11 wie folgt zu ändern:

‘Mitglieder, die an bestimmten Themen interessiert sind, können mit Zustimmung des Beirats Arbeitsgruppen errichten. Diese haben die Aufgabe, die Vorstände der betreffenden Kommissionen in Angelegenheiten zu beraten, denen nach ihrer Ansicht besondere Aufmerksamkeit entweder bei den Kongressen oder in der Zwischenzeit zu schenken ist.

Wenn es gewünscht sei eine Arbeitsgruppe zu errichten in der Zeit zwischen den Kongressen, soll der Generalsekretär brieflich die Genehmigung erwerben des Verwaltungsausschusses und des Vorsitzenden der einschlägigen Kommissionen.

Die Arbeitsgruppen können auch innerhalb des besonderen Aufgabenbereiches eigenen Briefwechsel führen und Nachrichten austauschen. Der Vorsitzende einer solchen Arbeitsgruppe soll durch den/die Präsidenten der betreffenden Kommission(en) nominiert werden.’

GENERAL TRAVEL INFORMATION

Travel requirements

M/s. India Tourism Development Corporation (ITDC) are helping the Congress in arranging tours and hotel accommodations and Air India is the Official Carrier. Local Air India offices will advise on formalities to be completed by the visitors for entry into and stay in India.

Participants will please ensure that they possess all necessary documents, valid passport and visa for entering into India (contact Embassy or High Commission's office). A valid International Certificate of vaccination against smallpox and cholera, as well as inoculation against yellow fever for those who have travelled from/through South America, Africa and other infested areas, is essential.

To facilitate clearance of unaccompanied baggage, if any, participants are advised to obtain a Landing Certificate from the Customs Officer at Delhi airport. For details of duty-free articles allowed to be brought into India, they should consult the Air India office/travel agent.

Participants are also advised to insure their baggage before leaving their country.

Currency regulations and money exchange

There are no restrictions on the amount of foreign currency (or travellers' cheques) a participant may bring. However, participants are advised to make a declaration on arrival on the Currency Declaration Form which will enable them to take the unspent foreign currency out of the country on departure.

Facilities for change of foreign currencies are available at the international airports and at the hotels. The participants are advised to bring their money in convertible currencies and to exchange money only through authorised dealers and obtain endorsement on the Currency Declaration Form.

Weather and clothing

Weather at Delhi during first half of February is generally fair and pleasant. After early morning mist, visibility is fairly good (woolen clothing is recommended). Details are as follows: Maximum temperature 24°C; Minimum temperature 7°C; Relative humidity 45%; Sunshine hours 6-7 hours; Average rainfall 5.7 mm.

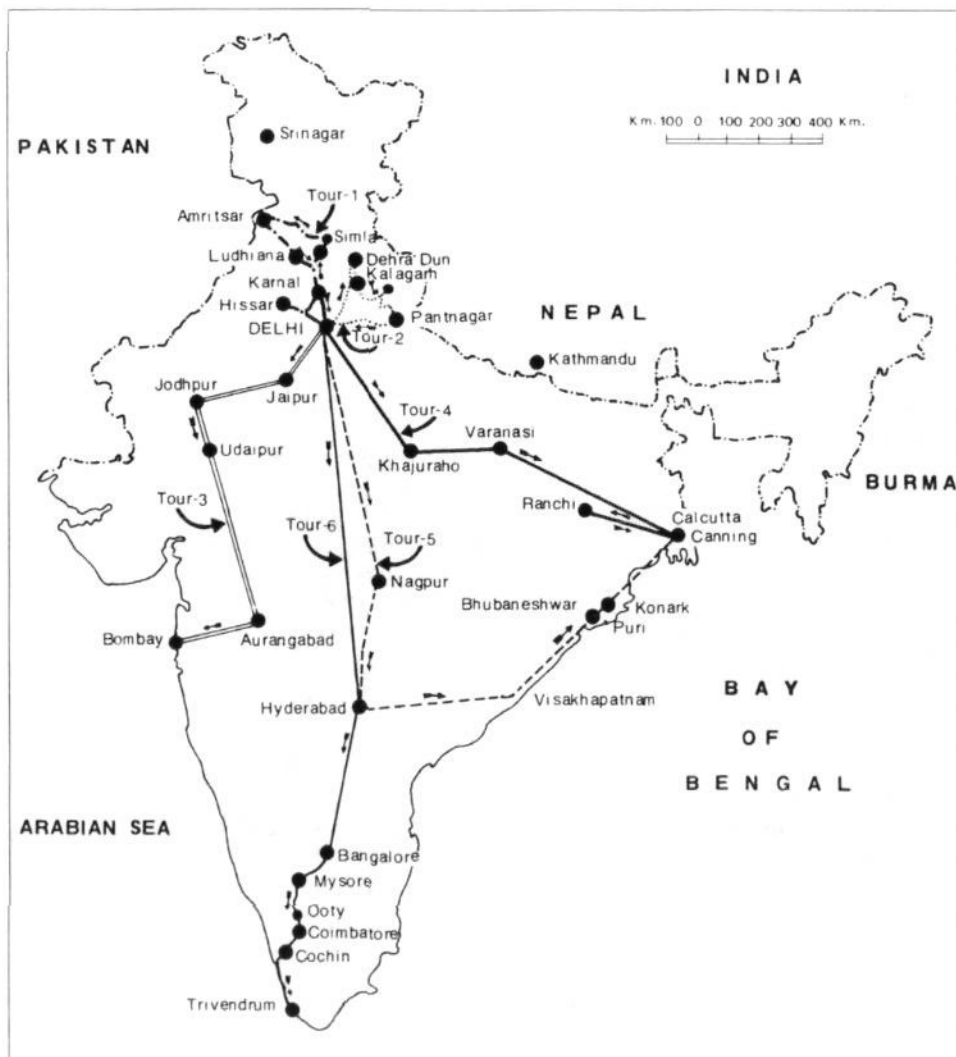
Registration and further enquiry, if any, may be addressed to:

**The Secretary,
12th International Congress of Soil Science,
Division of Soil Science and Agricultural Chemistry,
Indian Agricultural Research Institute,
New Delhi 110 012,
India**

POST-CONGRESS TOURS (1982)

Tour No.	Duration/ Anticipated Cost	Route	Highlights
1	Eight days (February 17-24, 1982) US \$ 475.00	Delhi/Hissar/ Karnal/Chandigarh Simla/Nangal/ Ludhiana/Amritsar/Delhi (by road)	Study of landscapes, soils cropping patterns, tubewell /canal irrigated areas of Indo-Gangetic alluvial plains of Haryana and Punjab and sub-montane and montane regions; visit to Agricultural Universities at Hissar and Ludhiana, Research Institutes at Karnal, Chandigarh, Simla, Nangal Fertilizer Factory, and Amritsar; visit to Pinjore Gardens of Mughal times and Golden Temple of Amritsar.
2	Seven days (February 17-23, 1982) US \$ 425.00	Delhi/Roorkee/ Dehra Dun/ Mussoorie/ Haridwar/ Corbett Park/ Nainital/ Pantnagar/ Delhi (by road)	Study of landscapes, soils, cropping patterns and different land utilization types in the Indo-Gangetic plains, sub-montane and montane areas including Tarai lands; visit to Agricultural University at Pantnagar, Research Institutions of irrigation, soil conservation, forestry and of aerial photo-interpretation; sight-seeing in Mussoorie and Nainital hill stations, famous Haridwar pilgrimage, sulphur springs and Jim Corbett Tiger Park in the natural forest settings.
3	Eight days (February 17-24, 1982) US \$ 650.00	Delhi/Jaipur/ Jodhpur/Udaipur/ Aurangabad/ Bombay (by air)	Study of landscapes, soils, agriculture and other land uses in semi-desert regions and semiarid Deccan plateau; visit to the Agricultural University and CAZRI, Jodhpur; sightseeing at Jaipur and Jodhpur, Ajanta and Ellora caves and cosmopolitan city of Bombay.
4	Seven days (February 17-23, 1982) US \$ 600.00	Delhi/Khajuraho/ Varanasi/Ranchi/ Calcutta (by air)	Study of landscapes, soils, agriculture and land use patterns in rolling Bundelkhand plains, Indo-Gangetic alluvial plains and Chhota Nagpur plateau; visit to Agricultural Universities at Varanasi and Ranchi; sight-seeing will cover famous sculptures at Khajuraho temples, Sarnath Budha temples, Ganges ghats at Varanasi, local visit in Calcutta.
5	Seven days (February 17-23, 1982) US \$ 650.00	Delhi/Nagpur/ Hyderabad/ Bhubaneswar/ Cuttack/Puri/ Calcutta (by air)	Study of landscapes, soils, and land use patterns in the Deccan plateau, rolling eastern plains, terraced rice cultivation; visit to Agricultural Universities at Hyderabad and Bhubaneswar and Research Institutes including International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad; sight-seeing at Hyderabad, Konarak and Puri temples, eastern sea coast and cosmopolitan city of Calcutta.
6	Nine days (February 17-25, 1982) US \$ 825.00	Delhi/Hyderabad/ Bangalore/Mysore/ Ootacamund/ Coimbatore/ Trivandrum/ Bombay (Part by air and part by road)	Study of landscapes, soils, agriculture and land use patterns in Deccan plateau, western hilly regions including tea and rice cultivation in coastal estuaries; visit to Agricultural Universities at Hyderabad and Coimbatore, Research Institutes on sugarcane, millets temperate fruit, and soil conservation including ICRISAT, Hyderabad, sight-seeing at Hyderabad, Bangalore and Mysore, famous Kovalam beach on the Western coast.

POST-CONGRESS TOURS, 12TH ISSS CONGRESS, 1982
 EXCURSIONS POST-CONGRÈS, 12ÈME CONGRESS DE L'AISS, 1982
 NACHKONGRESSZ-EXKURSIONEN, 12. KONGRESS DER IBG, 1982



DERNIERE INFORMATION

12ÈME CONGRES INTERNATIONAL DE LA SCIENCE DU SOL, 1982

L'Inde vous invite au 12ème Congrès International de la Science du Sol. Le Congrès se tiendra à Vigyan Bhavan, Maulana Azad Road, New Delhi, Inde, du 8 au 16 février 1982 et son thème est le suivant:

'AMENAGEMENT DES RESSOURCES DU SOL POUR REPONDRE AU DEFI DE L'HUMANITE'

L'Inde: Le pays hôte

L'Inde, le pays hôte et Delhi qui accueille le Congrès offrent aux visiteurs quelque chose de spécial partout et à tout point de vue. Ceux qui recherchent des vestiges d'histoire constateront que l'Inde est un pays où les races et les cultures se sont battues et mélangées, créant ainsi des oeuvres magnifiques dans l'art, l'architecture, les religions, la philosophie et les sciences. Ce pays est riche d'histoire ancienne avec ses temples, ses palais, ses fortifications, sa nature sauvage et ses décors magnifiques. Dotée de hautes montagnes couvertes de neige, de collines ondulées, de plateaux surélevés, de larges rivières, d'immenses plaines, d'une grande variété de sols et de cultures, l'Inde présente le plus grand enchantement dans sa diversité.

Les sols de l'Inde

L'Inde possède presque tous les types de sols que l'on rencontre habituellement sous les climats tropicaux, subtropicaux, tempérés, arides, semi-arides, humides et sub-humides.

Le Bureau National de Cartographie et d'Utilisation des Sols à Nagpur a fait des prospections extensives, préparé des cartes pédologiques et classé les sols suivant la Taxonomie américaine. Le Bureau, avec l'appui actif du Conseil Indien de la Recherche et des Universités d'agriculture fera paraître une publication sur les ressources en sols de l'Inde. Les Entisols (sols alluviaux) dans les plaines indo-gangétiques, les Vertisols (sols noirs) et les Alfisols (sols rouges) de la péninsule indienne et les Ultisols et Oxisols (latérites) dispersés dans les parties méridionales et orientales du pays sont les sols dominants. Les régions montagneuses et les piémonts de l'Himalaya ont une grande variété de sols de la zone tempérée.

PROGRAMME

Sessions plnières

Cinq communications importantes présentées par des spécialistes de renommée internationale attireront l'attention sur la gestion, les problèmes et les potentialités:

- des ressources en sols du monde
- des sols des zones arides
- des sols des zones semi-arides
- des sols des régions rizicoles
- de la conduite des sols (programme patronné par l'UNEP)

Colloques sur la future des recherches pedologiques

Trois personnalités scientifiques de chaque commission présenteront une analyse critique indiquant la façon dont les expérimentations peuvent contribuer à une meilleure compréhension et une meilleure fertilisation des sols.

Symposiums

Cinq symposiums approfondis seront organisés sur les sujets suivants. (On demande que les communications pour ces symposiums soit limitées à 5 ou 7 orateurs pour chaque sujet)

- Vertisols
- Sols rizicoles submergés
- Fumure organique dans les régions tropicales et subtropicales
- Fixation non symbiotique d'azote
- Désertification (Programme patronné par l'UNEP)

Commissions/Sous-commissions (communications facultatives)

Un certain nombre de communications aux différentes commissions ou sous-commissions seront présentées au cours de sessions simultanées ou conjointes. Elles traiteront des thèmes annoncés précédemment au auront trait à des sujet d'intérêt général des Commissions et sous-commissions (Physique du sol; Chimie du sol; Biologie et biochimie du sol; Fertilité du sol et nutrition des plantes; Genèse du sol, classification et cartographie; Technologie du sol; Minéralogie du sol; Sols salins; Micro-morphologie).

Discussions des groupes de travail

Ces discussions seront organisées sur des sujets d'intérêt professionnel.

Posters

Les auteurs qui ont l'intention de présenter des communications facultatives aux cours des posters doivent le signaler en même temps qu'ils remettent leur communication. Les auteurs seront responsables de la préparation des projections qui devront être lisibles à une distance d'environ 2 mètres.

Exposition

Une exposition des principaux sols de l'Inde, de livres et de publications techniques sur les sols et le sciences connexes sera organisée.

Indications générales concernant la soumission et la présation des communications

- Seuls les membres de l'AISS sont autorisés à présenter des communications.
- Un participant ne peut soumettre qu'une seule communication comme auteur principal et une communication comme co-auteur.
- Chaque communication devra être accompagnée d'un résumé ne dépassant pas 150 mots en anglais, en français et en allemand (2 copies).
- Le texte intégral de la communication sera soumis en même temps que le résumé (2 copies), dactylographié correctement en double espace, avant le 31 mars 1981.
- Un total de 25 minutes, y compris les dix minutes de discussion, sera accordé pour chaque communication.
- Le Comité Organisateur se réserve le droit de sélectionner et d'éditer toutes les communications lui soumises et seules les communications approuvées pourront être présentées.
- Les auteurs doivent s'occuper eux-mêmes de leur inscription qui doit être payée avant le 20 avril 1981.

Comptes-rendus

On se propose de publier l'entièreté de toutes les communications acceptées. Cependant, en ce qui concerne les communications facultatives, seuls les résumés seront publiés et distribués gratuitement aux participants inscrits.

Excursions post-Congrès

Au cours des six excursions qui seront faites après le Congrès. (voir p. 7), les participants auront amplement le temps d'étudier les sols, leurs problèmes et les recherches concernant la conservation, l'amélioration, la fertilité et l'aménagement des sols, les problèmes de l'eau et de la production agricole. Par conséquent, les pédologues venant, soit des pays industrialisés, soit des pays en voie de développement et ceux qui s'intéressent à l'une ou l'autre branche de la science du sol comme la pédologie, la chimie, la physique, la biologie, la fertilité et la nutrition des plantes, la technologie, la microbiologie, l'agronomie et l'aménagement des sols, trouveront de quoi les intéresser. Au cours des excursions, l'aspect touristique a également été envisagé. Le prix des excursions mentionné aux pages 13 et 7 est le prix par personne partageant une chambre double. Il comprend la pension et le logement au cours du voyage ainsi que le transport et le livret-guide.

Directives spéciales concernant les excursions

- Un nombre limité de délégués pourra participer à chaque excursion. Ceux qui ont l'intention d'y participer doivent réserver leur place en payant le montant de l'excursion avant la date prévue à cet effet en indiquant en même temps leur préférence dans l'inscription provisoire.
- Toutes les excursions partiront de Delhi le 17 février 1982 et se termineront à l'aéroport international renseigné aux pages 13 et 7.
- Les excursions se terminant à Calcutta (excursions 4 et 5) ou à Bombay (excursion 3) donneront la possibilité aux participants de prendre des courriers internationaux pour rentrer chez eux. Ces participants sont priés de faire le nécessaire pour assurer leur logement, au moment où ils prennent leur billet d'avion.
- Les participants qui voyagent avec leurs épouses/amis/parents et qui désirent un logement commun doivent le signaler expressément dans le bulletin d'inscription.
- Les participants qui doivent suivre un régime sont priés de le signaler à l'avance.
- Si le nombre minimum de participants n'est pas atteint pour l'une ou l'autre excursion, celle-ci sera annulée.

Excursions locales à Delhi

Ces excursions peuvent être organisées et on pourra s'y inscrire la veille. Le coût approximatif est de US \$ 10.— pour une demi-journée et de US \$ 20.— pour une journée.

Excursion à Agra (Taj Mahal)

Une excursion d'un jour à Agra, qui se trouve à environ 200 km de Delhi, peut être organisée lors d'une journée de repos au cours du Congrès dans le but de visiter le Taj Mahal et d'autres endroits typiques situés dans les environs d'Agra. Le prix approximatif est de US \$ 75.—.

Visite de Srinagar (Kashmir)/Khatmandu (Nepal)/Colombo (Sri Lanka)

Les participants intéressés par la visite de Kashmir/Khatmandu/Colombo sont invités à inclure la visite de ces endroits comme partie intégrante de leur billet international. Ce système est beaucoup plus sûr. Ils sont priés de contacter l'agent d'Air India de leur pays. Ils peuvent aussi payer séparément un billet pour l'une ou l'autre de ces visites.

Programme pour les épouses ou les personnes qui accompagnent

Des programmes tels que la visite de centres touristiques, le shopping, les revues culturelles, les spectacles modernes, les villages d'artisans, les marchés d'industries

locales, les dégustations de mets indiens spéciaux, les démonstrations de yoga et les traitements de massage herbière etc. peuvent être organisés pendant le Congrès. Des tickets pourront être achetés dans ce but.

Payements

- Frais d'inscription par participant (ils donnent droit à un US \$ 125.— ou RsI. 1000 exemplaire des comptes-rendus)
- Frais d'inscription après le 30 novembre 1981 US \$ 150.—
- Frais d'inscription pour l'épouse qui accompagne US \$ 50.—
- Acompte minimum pour la réservation de l'hôtel US \$ 100.—
- Acompte minimum pour l'excursion post-Congrès US \$ 100.—

(Note: L'inscription n'est ni remboursable ni transférable)

La somme est payable sous forme de chèque bancaire tiré sur la Banque d'État Indien à New Delhi en faveur du 12ème Congrès International de la Science du Sol et doit être envoyé au Secrétaire du Congrès. On est prié de séparer (i) les frais d'inscription, (ii) l'acompte pour l'hôtel, et (iii) l'acompte pour l'excursion post-Congrès et d'envoyer les chèques par recommandé et par avion (les chèques personnels ne seront pas acceptés).

Limites importantes

- Envoi d'un résumé accompagné d'une communication facultative (texte complet) 31 mars 1981* (date ultime)
- Réception des frais d'inscription des auteurs 20 avril 1981
- Dates ultimes pour:
 - (a) inscription provisoire 1 juillet 1981
 - (b) réception des frais d'inscription pour les participants ne présentant pas de communication
 - i) sans retard 30 novembre 1981
 - ii) avec retard 7 février 1982
 - (c) Dépôt pour les excursions post-Congrès 30 novembre 1981
 - (d) Réservation d'hôtel 30 novembre 1981
 - (e) Annulation de réservation d'hôtel 31 décembre 1981

* (La date ultime pour les communications invitée a été transmise par le Président aux auteurs concernés).

Logement

Avec l'aide de l'India Tourism Development Corporation (ITDC) nous avons fait une réservation globale pour les participants dans les hôtels suivants de Delhi. Les tarifs usuels par chambre individuelle/chambre double, petit déjeuner, et diner sont indiqués et augmenteront vraisemblablement de 20 à 40 % en février 1982 (1 US \$ = 7,50 RsI).

Nom de l'hôtel	Conditions/jour		Prix approximatif des repas				
	Chambre individuelle (une occupation)		Chambre double (deux personnes)		Petit Déjeuner	Déjeuner	Diner
	RsI	US \$	RsI	US \$	RsI	RsI	RsI
Oberoi International	595	80	695	93	Les taux sont plus élevés qu'à l'hôtel Ashoka		
Taj Mahal	550	73	650	87			
Hôtel Ashoka	350	47	450	60	30	49	49
Hôtel Akbar	275	37	350	47	28	45	45
Hôtel Aknish	250	33	325	43	26	39	39
Hôtel Qutub	200	27	300	40	21	38	38
Hôtel Janpath	165	22	265	35	26	39	39
Hôtel Lodhi	140	19	210	28	20	34	34
Hôtel Ranjit	125	17	185	25	20	34	34

Il est demandé aux participants d'indiquer en fin de l'inscription provisoire leur choix pour trois hôtels dans l'ordre de préférence et les dates pour lesquelles la réservation est désirée. Le dépôt d'un minimum de US \$ 100.— est nécessaire pour la réservation de l'hôtel. En raison de l'affluence de touristes, la direction des hôtels ne peut pas garantir la disponibilité d'une chambre si le dépôt minimum n'est pas reçu. Chaque participant est responsable personnellement de la vérification de la réception de l'acompte versé à l'hôtel. Les organisateurs ne sont responsables que de la réservation à des taux normaux.

Une pré-Congrès Conférence aux Philippines

La Conférence Internationale sur la Chimie et l'Approvisionnement Alimentaire Mondial (CHEMRAWN II) est organisée à Manille (Philippines) du 2 au 6 février 1982 en coopération avec l'AISS et peut être d'un intérêt particulier pour les chimistes du sol et les spécialistes en fertilité du sol. Les participants intéressés par cette Conférence peuvent s'adresser au Dr N. C. Brady, Directeur Général, International Rice Research Institute (IRRI), P.O. Box 933, Manille, Philippines.

INFORMATIONS GENERALES SUR LES VOYAGES

Exigences de voyage

India Tourist Development Corporation (ITDC) assistera le Congrès pour organiser les excursions et les réservations d'hôtel. Air India est le transporteur officiel. Les bureaux locaux d'Air India peuvent donner des conseils sur les formalités à remplir par les visiteurs en ce qui concerne l'entrée et le séjour en Inde.

Les participants sont priés de s'assurer d'être en possession de tous les documents nécessaires, passeport valide et visa d'entrée en Inde (contacter à ce sujet l'Ambassade ou le Consulat). Un certificat international valide de vaccination contre la variole et le choléra (une inoculation contre le fièvre jaune pour ceux qui transitent ou viennent d'Amérique du Sud, d'Afrique ou d'une région infestée) est indispensable.

Pour faciliter le dédouanement des bagages non accompagnés, si c'est le cas, les participants sont priés de se munir d'un certificat de débarquement fourni par l'officier des douanes à l'aéroport de Delhi. Pour les détails concernant les articles non soumis aux droits de douane et qu'on introduit en Inde, on est prié de consulter l'agence de voyage Air India.

Les participants sont également invités à assurer leurs bagages avant leur voyage.

Règlements concernant la circulation et l'échange de monnaies

Il n'y a pas de restriction quant à la quantité d'argent étranger (ou de chèques de voyage) que le participant importe. Cependant, les participants sont priés de faire une déclaration à leur arrivée sur un formulaire. Celui-ci sera nécessaire au moment de leur départ pour rentrer chez eux avec l'argent étranger non dépensé.

On peut facilement échanger de l'argent étranger dans les aéroports internationaux et dans les hôtels. Les participants sont invités à prendre leur argent en monnaie convertible et de ne faire le change que chez les agents autorisés. Ces opérations seront indiquées sur le formulaire de déclaration.

Climat et habillement

Le climat pendant la première semaine de février est généralement beau et agréable. Après les premiers brouillards matinaux, la visibilité est très bonne (des vêtements de laine sont recommandés). Quelques données climatiques sont : Température maximale 24°C; Température minimale 7°C; Humidité relative 45%; Heures d'insolation 6-7 heures; Précipitations moyennes 5,7 mm.

EXCURSIONS POST-CONGRES 1982

Exc. No.	Durée/ Prix prévu	Itinéraire	Points principaux
1	Huit jours (17-24 février 1982) US \$ 475.00	Delhi/Hissar/ Karnal/Chandigarh Simla/Nangal/ Ludhiana/Amritsar/ Delhi (par route)	Étude des paysages, des sols, des modes de cultures, des surfaces irriguées par puits et canaux dans les plaines indo-gangétiques de Haryana et Punjab et des régions des contreforts et des montagnes; visite des universités d'agriculture de Hissar et Ludhiana, des instituts de recherches de Karnal, Chandigarh et Simla, d'une fabrique d'engrais à Nangal, et Amritsar; visite des jardins Pinjore de Mughal et du temple d'or d'Amritsar.
2	Sept jours (17-23 février 1982) US \$ 425.00	Delhi/Roorkee/ Dehra Dun/ Mussoorie/ Haridwar/ Corbett Park/ Nainital/ Pantnagar/Delhi (par route)	Étude des paysages, des sols, des modes de cultures et des différents types d'utilisation des sols dans les plaines indo-gangétiques et les régions des contreforts et des montagnes y comprises les zones Tarai; visite de l'université d'agriculture de Pantnagar, des instituts de recherches sur l'irrigation, la conservation des sols, la sylviculture et la photo-interprétation aérienne; curiosités à Mussoorie et stations d'altitude à Nainital, le pèlerinage renommé de Haridwar, les sources sulfureuses et le Jim Corbett Tiger Park dans des sites forestiers naturels.
3	Huit jours (17-24 février 1982) US \$ 650.00	Delhi/Jaipur/ Jodhpur/Udaipur/ Aurangabad/ Bombay (par avion)	Étude des paysages, des sols, de l'utilisation agricole et autre dans les régions semi-désertiques et semi-arides du plateau de Deccan; visite de l'université d'agriculture et de CAZRI à Jodhpur; curiosités à Jaipur et Jodhpur, les caves de Ajanta et Ellora et la ville cosmopolite de Bombay.
4	Sept jours (17-23 février 1982) US \$ 600.00	Delhi/Khajuraho/ Varanasi/Ranchi/ Calcutta (par avion)	Étude des paysages, des sols et des méthodes agricoles et d'utilisation dans les plaines ondulées de Bundelkhand, dans les plaines indo-gangétiques et sur les plateaux du Chota Nagpur; visites des universités d'agriculture à Varanasi et Ranchi; comme curiosités: les fameuses sculptures des temples à Khajuraho, les temples de Boudha à Sarnath, les terrasses du Gange à Varanasi la visite locale de Calcutta.
5	Sept jours (17-23 février 1982) US \$ 650.00	Delhi/Nagpur/ Hyderabad/ Bhubaneswar/ Cuttack/Puri/ Calcutta (par avion)	Étude des paysages, des sols et des modes d'utilisation des sols sur le plateau de Deccan, les plaines ondulées orientales, les cultures rizicoles en terrasses; visite des universités d'agriculture à Hyderabad et Bhubaneswar et les instituts de recherches parmi lesquels l'Institut de recherches international sur les cultures pour les tropiques semi-arides (ICRISAT) à Hyderabad; curiosités à Hyderabad, les temples de Konarak et Puri, la côte maritime orientale et la ville cosmopolite de Calcutta.
6	Neuf jours (17-25 février 1982) US \$ 825.00	Delhi/Hyderabad/ Bangalore/Mysore/ Ootacamund/ Coimbatore/ Trivandrum/ Bombay (en partie par air, en partie par route)	Étude des paysages, des sols, des méthodes agricoles et d'utilisation des sols sur le plateau de Deccan, les régions montagneuses occidentales y compris les cultures de thé et de riz des estuaires côtiers; visite des universités d'agriculture de Hyderabad et Coimbatore, des instituts de recherches sur la canne à sucre, le millet, les fruits des zones tempérées et la conservation des sols y compris l'ICRISAT à Hyderabad; curiosités à Hyderabad, Bangalore et Mysore, la célèbre plage de Kovalum sur la côte occidentale.

D'autres informations, si c'est nécessaire, peuvent être demandée à:

Le Secrétaire
12ème Congrès International de la Science du Sol
Division of Soil Science and Agriculture Chemistry
Indian Agricultural Research Institute
New Delhi 110 012
India.

LETZTE ANKÜNDIGUNG

12. INTERNATIONALER KONGREß FÜR BODENKUNDE, 1982

Indien lädt Sie zum 12. Internationalen Kongreß für Bodenkunde ein. Der Kongreß wird in der Zeit vom 8. bis zum 16. Februar 1982 am Vigyan Bhaven, Maulana Azad Road, Neu Delhi, Indien, abgehalten und steht unter dem Thema:

**'DIE NUTZUNG DER BODENRESSOURCEN ALS ANTWORT AUF DIE
HERAUSFORDERUNG AN DIE MENSCHHEIT.'**

Indien, das Gastgeberland

Indien, das Gastgeberland und Delhi, die Kongreßstadt bieten dem Besucher in jeder Hinsicht besonderes an. Wer den Spuren der Geschichte folgen will, wird in Indien einen Schmelztiegel von Rassen und Kulturen finden, aus deren Gegensätzen vollendete Schöpfungen der Kunst, Religion, Philosophie und Wissenschaft entstanden sind. Indien ist reich an Altertümern, Tempeln, Palästen, Forts aber auch an freilebenden Tier- und Pflanzenarten und großartigen Landschaften. Mit seinen himmelragenden schneebedeckten Bergen, seinen sanften Hügeln, Hochebenen, ausgedehnten Niederungen und Strömen, seinen unterschiedlichen Böden und Nutzpflanzen liegt der stärkste Reiz des Landes in seiner Verschiedenartigkeit.

Indische Böden

Indien besitzt fast alle Bodentypen, die man unter tropischen, subtropischen, gemäßigten, ariden, semiariden, humiden und subhumiden Klimabedingungen normalerweise antrifft.

Das Nationale Amt für Bodenvermessung und Bodennutzungsplanung in Nagpur hat ausgedehnte Übersichten erstellt, Bodenkarten gezeichnet und die Böden gemäß der amerikanischen Taxonomie klassifiziert. Dieses Amt wird eine Publikation über die Bodenressourcen von Indien veröffentlichen, wobei es vom Indischen Rat für Landwirtschaftliche Forschung und den landwirtschaftlichen Hochschulen des Landes tatkräftig unterstützt wird. Entisole (alluviale Böden) in der Indus-Ganges Ebene, Vertisole (schwarze Böden) und Alfisole (rote Böden) auf der indischen Halbinsel sowie Ultisole und Oxisole (Laterit), die verstreut im den südlichen und östlichen Teilen des Landes auftreten, sind die vorherrschenden Typen. In den montanen und submontanen Gebieten des Himalayas finden wir außerdem noch mehrere Bodenarten der gemäßigten Zonen.

PROGRAMM

Plenarsitzungen

In den fünf Hauptvorträgen werden Behandlung, Probleme und Möglichkeiten der

- Welt-Bodenressourcen
 - Böden arider Zonen
 - Böden semiarider Zonen
 - Böden der Reisanbaugebiete
 - Bodennutzungsplanung (durch das UNEP unterstütztes Programm)
- durch international anerkannte Fachleute erörtert und ins Zentrum der Aufmerksamkeit gerückt.

Allgemeine Diskussion: Bodenkunde wohin?

Aus jeder Kommission werden drei führende Wissenschaftler eine kritische Analyse darüber durchführen, in welcher Weise ihre Spezialgebiete zu besserem Verständnis und besserer Ausnutzung der Böden beitragen könnten.

Symposien

Zu den folgenden Themen werden fünf Schwerpunktssymposien veranstaltet (Die Vorträge zu den Symposien erfolgen auf Einladung und sind auf 5–7 Sprecher für jedes Thema begrenzt)

- Vertisole
- Überflutete Reisböden
- Organische Düngung in den Tropen und Subtropen
- Nicht-symbiotische Stickstoffbindung
- Wüstenentstehung (durch das UNEP unterstütztes Programm)

Kommissionen/Subkommissionen (anzumeldende Vorträge)

Einige angemeldete Vorträge zu den verschiedenen Kommissionen/Subkommissionen werden in parallelen – oder, wo nötig in gemeinschaftlichen – Sitzungen gehalten. Die sollen entweder die schon früher bekanntgegebenen Themen behandeln oder für eine der nachfolgenden Kommissionen/Subkommissionen von allgemeinem Interesse sein (Bodenphysik; Bodenchemie; Bodenbiologie und Bodenbiochemie; Bodenfruchtbarkeit und Pflanzenernährung; Bodengenetik, Klassifikation und Kartographie; Bodentechnologie; Bodenmineralogie; Salzböden; Mikromorphologie).

Diskussionen in Arbeitsgruppen

Diskussionen in Arbeitsgruppen werden für Themen von besonderem fachlichem Interesse veranstaltet werden.

'Poster sessions'

Autoren, die ihre Arbeiten in Poster Sessions ausstellen wollen, werden ersucht, dies beim Einsenden ihrer Arbeiten mitzuteilen. Sie sind für die Herstellung der Poster, die aus 2 Meter Entfernung noch lesbar sein sollten, selbst verantwortlich.

Ausstellung

Eine Ausstellung wichtiger Indischer Böden sowie Bücher und wissenschaftlicher Veröffentlichungen über Böden und damit verbundener wissenschaftlicher Probleme, wird veranstaltet werden.

Allgemeine Richtlinien für das Einreichen und Halten von Vorträgen

- Nur Mitglieder der IBG kommen für das Halten von Vorträgen in Betracht.
- Ein Teilnehmer kann höchstens einen Vortrag als erster Autor und einen als Koautor anmelden.
- Jeder Vortrag muß mit einer schriftlichen Zusammenfassung versehen sein, die nicht mehr als 150 Worte zählt und in English, Französisch und Deutsch abgefaßt ist (2 Kopien).
- Der vollständige Text des Vortrages und die Zusammenfassung (2 Kopien), beide mit doppeltem Zeilenabstand getippt, müssen vor dem 31. März 1981 eingereicht werden.
- Die Sprechzeit pro Vortrag beträgt 25 Minuten, inklusive 10 Minuten für Diskussion.
- Das Organisationskomitee behält sich das Recht vor, unter den eingesandten Arbeiten und Zusammenfassungen eine Auswahl zu treffen und sie zu veröffentlichen. Es können nur die vom Organisationskomitee angenommenen Vorträge gehalten werden.
- Die Autoren müssen die Teilnehmergebühren vor dem 20. April 1981 erlegt haben.

Berichte

Die auf Einladung gehaltenen Vorträge sollen in voller Länge, die angemeldeten Vorträgen in zusammengefaßten Form veröffentlicht und gratis an die eingeschriebenen Teilnehmer verteilt werden.

Studienreisen im Anschluß an den Kongreß

Sechs Studienreisen im Anschluß an den Kongreß bieten den Teilnehmern weite Möglichkeiten, sowohl die Böden und ihre Probleme als auch die Forschung auf dem Gebiete der Bodenerhaltung, Bodenverbesserung, Bodenfruchtbarkeit, der Boden- und Wasserbewirtschaftung und der landwirtschaftlichen Produktion zu studieren. Auf diese Weise werden alle Bodenkundler, ob sie nun aus entwickelten oder sich entwickelnden Ländern kommen und ob sie sich für Pedologie, Chemie, Physik, Biologie, Fruchtbarkeit und Pflanzenernährung, Technologie, Mikrobiologie, Agronomie oder Bodenbewirtschaftung interessieren, auf ihre Rechnung kommen. Die Studienreisen berücksichtigen auch Sehenswürdigkeiten für Touristen. Die Kosten, die auf Seiten 19 und 7 angegeben sind, sind für eine Person berechnet, die mit jemandem ein Doppelzimmer teilt, und decken Verpflegung, Unterkunft, Flug- und Bus-kosten sowie Exkursionsführer.

Besondere Hinweise für Studienreisen

- Bei jeder Studienreise kann nur eine beschränkte Anzahl Personen teilnehmen. Interessenten sollten sich die Teilnahme sichern, indem sie die Beiträge bereits vor Einzahlungsschluß bezahlen und schon bei der Voranmeldung eine Rangordnung der bevorzugten Exkursionen angeben.
- Alle Studienreisen beginnen am 17. Februar 1982 und enden in der Nähe eines internationalen Flugplatzes wie auf Seiten 19 und 7 ersichtlich.
- Teilnehmer der Reisen, die in Kalkutta (Studienreise Nr. 4 und 5) oder Bombay (Studienreise Nr. 3) endigen, können unmittelbar von den dortigen Flughäfen aus die Heimreise antreten. In diesem Fall empfiehlt es sich beim Besorgen der Flugkarten auch die nötigen Übernachtungen zu buchen.
- Teilnehmer, die Ehegatten, Freunde oder Verwandte mitnehmen wollen und daher auf der Reise gemeinsame Unterkünfte wünschen, mögen dies ausdrücklich im Anmeldeformular vermerken.
- Teilnehmer mit irgendwelchen Einschränkungen bei den Mahlzeiten, werden gebeten, dies im Voraus bekanntzugeben.
- Sofern sich für eine Studienreise nicht genügend Teilnehmer anmelden, muß sie abgesagt werden.

Stadtbesichtigung von Delhi

Stadtbesichtigungen können bei Bedarf innerhalb eines Tages arrangiert werden. Eine Halbtagsrundfahrt kostet etwa US \$ 10.—, eine Ganztagsrundfahrt etwa US \$ 20.—.

Besichtigung von Agra (Taj Mahal)

Ein Tagesausflug in das etwa 200 km von Dehli entfernte Agra kann an einem freien Tag während des Kongresses organisiert werden, um das berühmte Taj Mahal und andere historisch interessante Sehenswürdigkeiten in und um Agra zu besichtigen. Die Kosten betragen etwa US \$ 75.—.

Besichtigung von Srinagar (Kaschmir), Katmandu (Nepal) oder Colombo (Sri Lanka)

Für die Teilnehmer, die an einer Besichtigung Kaschmirs, Katmandus oder Colombos interessiert sind, ist es ratsam, den Besuch eines dieser Orte in ihr internationales

Flugticket aufnehmen zu lassen, weil dies kostenmäßig günstiger ist. Wir empfehlen ihnen, dazu mit einer Air India Vertretung in ihrem Land Kontakt aufzunehmen. Natürlich kann man diese Flüge auch von Dehli aus buchen.

Programm für Ehegatten und Begleitpersonen

Programmpunkte wie Stadtbesichtigungen, Einkaufsbummel, kulturelle Darbietungen, Vorführungen von Zeremonien in historischen Kostümen, Besuch von Dörfern in denen Kunstgewerbe betrieben wird, und Märkten, auf denen Heimarbeitsprodukte verkauft werden, sowie Kostproben der indischen Küche, Yogavorführungen und Kräutermassagebehandlungen usw. können während des Kongresses organisiert und Karten dafür verkauft werden.

Einzahlungen

- Anmeldegebühr pro Teilnehmer (jeder Teilnehmer hat Anspruch auf ein Exemplar der Berichte) US \$ 125.—/1000 I.R.
 - Anmeldegebühr bei Anmeldung nach dem 30. Nov. 1981 US \$ 150.—
 - Anmeldegebühr für begleitende Ehegatten US \$ 50.—
 - Mindestanzahlung für Hotelunterkunft US \$ 100.—
 - Mindestanzahlung für Studienreisen nach dem Kongreß US \$ 100.—
- (Zur Beachtung: Die Anmeldegebühr wird weder zurückerstattet noch ist sie übertragbar.)

Die Gebühren können mittels Banküberweisung an die State Bank of India, New Delhi zugunsten des 12. Internationalen Bodenkundlichen Kongresses eingezahlt und Abschriften sollten dem Sekretariat des Kongresses zugeschickt werden. Bitte überweisen sie die Studienreisen jeweils mit einem eigenen Überweisungsauftrag und senden Sie die Benachrichtigung mit eingeschriebener Luftpost. (Persönliche Schecks werden nicht angenommen).

Wichtige Schlußtermine

- Einsendeschluß Kurzfassung mit (anzumeldendem) Vortragstext 31. März 1981* (endgültiger Termin).
- Eintreffen Anmeldegebühren von allen Autoren von Vorträgen 20. April 1981
- Letzter Termin für
 - a) Anmeldung 1. Juli 1981
 - b) Empfang der Anmeldegebühren von Teilnehmern außer Autoren
 - ohne Extragebühr 30. Nov. 1981
 - mit Extragebühr 2. Feb. 1982
 - c) Anzahlung für Studienreisen nach dem Kongreß 30. Nov. 1981
 - d) Hotelreservierung 30. Nov. 1981
 - e) Kündigung der Hotelreservierung 31. Dez. 1981

* Die Autoren, die zu einem Vortrag eingeladen wurden, haben den Einsendetermin für ihre Arbeiten vom Vorsitzenden mitgeteilt bekommen.

Unterkunft

Mit Unterstützung der India Tourism Development Corporation (ITDC) haben wir in den folgenden Hotels in Delhi Blockreservierungen vorgenommen. Sie finden dabei auch die momentanen Preise für Ein- und Zweibettzimmer, Frühstück, Mittag- und Abendessen. Man muß aber bis Februar 1982 mit einer Preissteigerung von 20-40% rechnen (1 US \$ = 7.50 I.R.)

Name des Hotels	Zimmerpreis pro Tag				Richtpreise für Mahlzeiten		
	Einbettzimmer (einfach belegt)		Zweibettzimmer (doppelt belegt)		Früh- stück	Mittag- essen	Abend- essen
	I.R.	U.S. \$	I.R.	U.S. \$	I.R.	I.R.	I.R.
Oberoi Intercontinental	595	80	695	93	Preise höher als im Hotel Ashoka		
Taj Mahal	550	73	650	87			
Ashoka Hotel	350	47	450	60	30	49	49
Akbar Hotel	275	37	350	47	28	45	45
Kanishk Hotel	250	33	325	43	26	39	39
Qutub Hotel	200	27	300	40	21	38	38
Hotel Janpath	165	22	265	35	26	39	39
Hotel Lodhi	140	19	210	28	20	34	34
Hotel Ranjit	125	17	185	25	20	34	34

Die Teilnehmer werden ersucht, bei ihrer endgültigen Anmeldung 3 Hotels in der Reihenfolge ihrer Wahl anzugeben. Mindestens US \$ 100.— müssen als Anzahlung für die Hotelreservierung geleistet werden. Die Hotelverwaltungen können angesichts des Touristenandranges keine Unterbringung garantieren, wenn diese Mindestanzahlung nicht eingetroffen ist. Jeder Teilnehmer rechnet selbst mit dem Hotel ab. Die Veranstalter sind nur für die Beschaffung der Unterkunft zu ermaßigten Preisen verantwortlich.

Eine Pre-Kongreß Konferenz auf die Philippinen

Die Internationale Konferenz über Chemie und Welt-Nahrungsversorgung (Chem-rawn II) wird in Zusammenarbeit mit der IBG vom 2.–6. Feb. 1982 in Manila (Philippinen) veranstaltet und wird besonders für Bodenchemiker und Bodenfruchtbarkeitsfachleute von Interesse sein. Interessierte Teilnehmer sollten an Dr. N. C. Brady, Generaldirektor, Internationales Reisforschungsinstitut (IRRI), P.O. Box 933, Manila, Philippinen, schreiben.

ALLGEMEINE REISEINFORMATIONEN

Organisation und Reisedokumente

Die India Tourism Development Corporation (ITDC) unterstützt den Kongreß bei der Organisation der Studienreisen und der Hotelreservierung. Air India wird die offizielle Flugesellschaft des Kongresses sein. Air India Niederlassungen in allen Städten können Auskünfte über die Formalitäten erteilen, die zur Einreise und zum Aufenthalt in Indien erforderlich sind.

Die Teilnehmer werden ersucht, sich zu vergewissern, ob sie alle erforderlichen Reisedokumente besitzen (bitte nehmen Sie mit der Botschaft oder einem High Commissions Büro Kontakt auf). Ein gültiges internationales Impfzeugnis für Pocken und Cholera ist unerlässlich (ebenso gegen Gelbfieber für Personen, die Südamerika, Afrika oder ein anderes verseuchtes Gebiet bereist haben).

Um die Zollabfertigung von unbegleitetem Reisegepäck (sofern vorhanden) zu beschleunigen, empfehlen wir den Teilnehmern, beim Zollamt des Flughafens Delhi ein Landungszertifikat zu besorgen. Einzelheiten über die Einfuhr zollfreier Waren nach Indien können in den Air India Niederlassungen und Reisebüros erfragt werden.

Wir empfehlen den Kongreßteilnehmern auch, ihr Gepäck vor der Abreise aus ihrem Land versichern zu lassen.

Währungsbestimmungen und Geldwechsel

Bei der Einfuhr ausländischer Währungen oder von Reiseschecks nach Indien bestehen keine Beschränkungen. Es ist aber ratsam, bei der Einreise ein Formular zur

NACHKONGRESS-EXKURSIONEN (1982)

Exk. No.	Dauer/voraus-sichtliche Kosten	Route	Höhepunkte
1	Acht Tage (17.-24. Februar 1982) US \$ 475.00	Delhi/Hissar/ Karnal/Tschnadigar/ Simla/Nangal/ Ludhiana/Amritsar/Delhi (durchwegs Bus)	Besichtigung der Landschaften, Böden, Bewirtschaftungsformen, Bewässerung in den alluvialen Indus-Ganges-ebenen von Haryana und Punjab sowie in submontanen und montanen Gebieten; ein Besuch der Landwirtschaftlichen Hochschulen vom Hissar und Ludhiana, von Forschungsinstituten in Karnal, Tschandigar, Simla und Amritsar; Besuch der Düngerfabrik Nangal; Besuch der Pinjore Gärten aus der Mughalzeit und des goldenen Tempels zu Amritsar.
2	Sieben Tage (17.-23. Februar 1982) US \$ 425.00	Delhi/Roorkee/ Dehra Dun/ Mussoorie Haridwar Corbett Park/ Nainital/ Pantnagar/Delhi (durchwegs Bus)	Besichtigung der Landschaften, Böden, Landwirtschaftsformen und verschiedene Arten der Bodennutzung in den Indus-Gangesebenen, submontanen und montanen regionen einschließlich dem Taria-Gebiet; Besuch der Landwirtschaftlichen Hochschule in Pantnagar, von Forschungsinstitut für Bewässerung, Bodenerhaltung, Forstwirtschaft und für Luftbilder-Auswertung; Besichtigung der Höhenkurorte Mussoorie und Nainital, der berühmten Pilgerstätte Haridwar, der Schwefelquellen und des Jim Corbett Tiger Park in die natürliche Wäldern.
3	Acht Tage (17.-24. Februar 1982) US \$ 650.00	Delhi/Jaipur/ Jodhpur/Udaipur/ Aurangabad/ Bombay (durchwegs Flugzeug)	Besichtigung der Landschaften, Böden; Landwirtschaftliche und andere Landnutzungen in Halbwüsten- und Wüstengebieten und am semiariden Deccan-Plateau; Besuch der landwirtschaftliche Hochschule CAZRI und Jodhpur; Sehenswürdigkeiten in Jaipur und Jodhpur, die Höhlen von Ajanta und Ellora und die Weltstädtische City von Bombay.
4	Sieben Tage (17.-23. Februar 1982) US \$ 650.00	Delhi/Khajuraho/ Varanasi/Ranchi/ Kalkutta (durchwegs Flugzeug)	Besichtigung der Landschaften, Böden; Formen der Landnutzung in den schwachhügeligen Bundelkhand Ebenen, alluviale Indus-Gangesebene und Chhota Nagpur Plateau; Besuch der Landwirtschaftlichen Hochschulen in Varanasi und Ranchi; zu den Sehenswürdigkeiten werden die berühmten Skulpturen im Tempel von Khajuraho und von Sarnath Budha, sowie die am Ganges gelegenen Tempel bei Varanasi; Besichtigung innerhalb von Kalkutta.
5	Sieben Tage (17.-23. Februar 1982) US \$ 650.00	Delhi/Nagpur/ Haiderabad/ Bhubaneswar/ Cuttack/Puri/ Kalkutta (durchwegs Flugzeug)	Besichtigung der Landschaften, Böden; Formen der Landnutzung auf dem Deccan-Plateau, östliches Hügelland und terrassenförmigen Reiskulturen; Besuch der landwirtschaftlichen Hochschulen in Haiderabad und Bhubaneswar und von Forschungsstationen, darunter das Internationale Institut für Nutzpflanzenforschung in den Semiariden Tropen (ICRISAT, Haiderabad); Sehenswürdigkeiten in Haiderabad, Tempel in Konarak und Puri, östliche Meeresküste und weltstädtische City von Kalkutta.
6	Neun Tage (17.-25. Februar 1982) US \$ 825.00	Delhi/Haiderabad/ Bangalur/Maisur/ Ootacamund/ Koimbatur/ Trivandrum/ Bombay (Flugzeug/Bus)	Besichtigung der Landschaften, Böden; Formen der Landwirtschaft und Landnutzung auf dem Deccan-Plateau, westliche Hügellandschaften mit Tee- und Reiskulturen in den erweiterten Flußmündungen; Besuch der Landwirtschaftlichen Hochschulen in Haiderabad und Koimbatur, Forschungsinstitute für Zuckerrohr, Hirse, für Früchte der gemässigten Zonen und für Bodenerhaltung, darunter das Internationale Institut für Nutzpflanzenforschung in den Semiariden Tropen (ICRISAT, Haiderabad); Sehenswürdigkeiten in Haiderabad, Bangalur und Maisur; der berühmte Kovalamstrand an der Westküste.

Währungsdeklaration auszufüllen. Man kann damit nicht ausgegebene ausländische Währungen bei der Ausreise wieder ausführen.

Ausländisches Geld kann in den Hotels und internationalen Flughäfen eingewechselt werden. Es wird dringend empfohlen, nur einwechselbare Währungen mitzubringen, das Geld nur an offiziellen Wechselstuben einzutauschen und jeden Umtausch auf der Währungsdeklaration bestätigen zu lassen.

Wetter und Kleidung

Das Wetter ist in Delhi in der ersten Februarhälfte normalerweise mild und angenehm. Nach morgendlichen Frühnebel ist die Fernsicht recht gut (wir empfehlen Wollkleidung). Einige Klimadaten sind: Höchsttemperaturen 24°C; Tiefsttemperaturen 7°C; Relative Luftfeuchtigkeit 45%; Sonnenscheindauer 6-7 Stunden; Durchschnittlicher Niederschlag 5,7 mm.

Falls sich weitere Fragen ergeben, wenden Sie sich bitte an:

**THE SECRETARY
12TH INTERNATIONAL CONGRESS OF SOIL SCIENCE
DIVISION OF SOIL SCIENCE AND AGRICULTURAL CHEMISTRY
INDIAN AGRICULTURAL RESEARCH INSTITUTE
NEW DELHI 110 012
INDIEN**

CHEAP GROUP FLIGHT FROM EUROPE TO THE 12TH INTERNATIONAL CONGRESS OF SOIL SCIENCE

Brussels – Bombay – New Delhi – Bombay – Brussels

Upon request the ISSS will organize a special group flight to New Delhi for participants at the congress and other accompanying persons.

The following flight schedule has been proposed:

- Departure: Thursday, February 4, 1982: departure Brussels airport at 12.15 hrs
Friday, February 5, 1982: arrival Bombay at 02.50 hrs; departure Bombay at 06.00 hrs; arrival New Delhi at 07.50 hrs.
- Return: Thursday, February 25, 1982: departure New Delhi at 17.50 hrs; arrival Bombay at 19.40 hrs; departure Bombay at 22.15 hrs.
Friday, February 26, 1982: arrival Brussels at 06.00 hrs.

The flight will be organized only if a sufficient number of participants are interested (minimum 30 persons). The price will be less than 1000 US dollars (at the current rate of January 1981). Hotel accommodation for participants at the congress should be arranged directly with the organisers of the congress in India. The organisers of the special group flight and the ISSS are not responsible for any difficulties experienced by those who have not booked accommodation in good time.

Important deadlines:

- A first notice of intent should reach the treasurer by June 30th, 1981.
- A final notice of intent with a deposit of 250 US dollars should reach the treasurer by November 1, 1981. In case the flight is cancelled the deposit will be refunded before December 1, 1981.
- Full payment of the air ticket is required before January 1, 1982. No refunds will be made after that date.

The *corresponding address* for the group flight:

Dr. D. Gabriels, Treasurer ISSS, University of Ghent, Coupure Links 533, B 9000 Ghent, Belgium.

VOL GROUPE À BON COMPTE DE L'EUROPE AU 12ÈME CONGRÈS INTERNATIONAL DE LA SCIENCE DU SOL

Bruxelles – Bombay – New Delhi – Bombay – Bruxelles

L'AISS a l'intention d'organiser un vol groupé pour les participants au congrès ainsi que pour d'autres personnes intéressées, accompagnant les membres.

Le plan de vol suivant est proposé:

- Départ: Jeudi, 4 février 1982: Aéroport Bruxelles National à 12h15.
Vendredi, 5 février 1982: arrivée à Bombay à 2h50; départ de Bombay à 6h00; arrivée à New Delhi à 7h50.
- Retour: Jeudi, 25 février 1982: départ de New Delhi à 17h50; arrivée à Bombay à 19h40; départ de Bombay à 22h15.
Vendredi, 26 février 1982: arrivée à Bruxelles à 6h00.

Le vol sera organisé uniquement si le nombre de participants est suffisant (minimum 30 personnes). Le prix sera inférieur à 1000 US dollars (au prix courant de Janvier

1981). L'hébergement des participants au congrès pourra être arrangé directement par les organisateurs du congrès. Les organisateurs du vol special ainsi que l'AISS ne sont pas responsable pour d'éventuelles difficultés qui résulteraient d'une réservation de logement tardive.

Calendrier à respecter

- un premier avis d'intention devrait parvenir au trésorier avant le 30 juin 1981.
- une inscription définitive accompagnée d'un versement de 250 US dollars serait envoyée au trésorier avant le 1 novembre 1981. Si le vol était annulé, le versement sera renvoyé avant le 1 décembre 1981.
- le solde du ticket est demandé avant le 1 janvier 1982. Aucun remboursement ne sera effectué après cette date.

Toute *correspondance* pour le vol spécial sera adressée à:
Dr. ir. D. Gabriels, Trésorier de l'AISS, Université de Gand, Coupure Links 533, B 9000 Gand, Belgique.

BILLIGER GRUPPENFLUG VON EUROPA ZUM 12. INTERNATIONALEN BODENKUNDLICHEN KONGRESS

Brussel – Bombay – Neu Delhi – Bombay – Brussel

Auf Wunsch wird die IBG einen speziellen Gruppenflug nach Neu Delhi organisieren für Teilnehmer an dem Kongreß und anderen begleitenden Personen.

Das folgende Flugschema wird vorgeschlagen:

- Abfahrt: Donnerstag, den 4. Februar, 1982: Abfahrt Brussel Flughafen um 12.15 Uhr.
Freitag, den 5. Februar, 1982: Ankunft Bombay um 02.50 Uhr, Abfahrt Bombay um 06.00 Uhr, Ankunft Neu Delhi um 07.50 Uhr.
- Rückfahrt: Donnerstag, den 25. Februar, 1982: Abfahrt Neu Delhi um 17.50 Uhr, Ankunft Bombay um 19.40 Uhr, Abfahrt Bombay um 22.15 Uhr.
Freitag, den 26. Februar, 1982: Ankunft Brussel um 06.00 Uhr.

Der Flug wird nur organisiert worden als eine genügende Anzahl Teilnehmer interessiert ist (Minimum 30 Personen). Der Preis werde weniger als 1000 US Dollar betragen (nach dem jeweiligen Kurs am Januar 1981). Hotelunterkunft für Teilnehmer an dem Kongreß sollte unmittelbar arrangiert werden mit den Organisatoren des Kongresses in India. Die Organisatoren des speziellen Gruppenfluges und die IBG sind nicht verantwortlich für irgendwelchen Schwierigkeiten begegnet durch diejenigen, die ihre Unterkunft nicht rechtzeitig reserviert hätten.

Wichtige Zeitlimate

- Eine erste Beteiligungsanzeige sollte den Schatzmeister am 30. Juni 1981 erreicht haben.
- Eine endgültige Beteiligungsanzeige einschließlich eines Vorschusses von 250 US Dollar sollte den Schatzmeister am 1. November 1981 erreicht haben. Im Fall einer Flugannullierung werde das Vorschuß vor Januar 1982 wiedereinzahlt.
- Der Flugschein soll vor 1. Januar, 1982 völlig zahlt sein. Nach diese Datum werden keine Rückzahlungen mehr entrichtet.

Die *Korrespondenzanschrift* für den Gruppenflug ist:
Dr. D. Gabriels, Schatzmeister IBG, Universität von Gent, Coupure Links 533, B 9000 Gent, Belgien.

12TH INTERNATIONAL CONGRESS OF SOIL SCIENCE

REGISTRATION FORM

The Congress will be held in New Delhi, India, during February 8-16, 1982. The participants are requested to complete this form and mail it to the following address:

The Secretary
12th International Congress of Soil Science
Division of Soil Science and Agricultural Chemistry
Indian Agricultural Research Institute
New Delhi 110 012
India

Please type or print in block letters.

Name: Dr./Mr./Mrs./Miss

Address:

Function:

☐ I will be accompanied by

Wife Name

Others Name

☐ I register for the Post-Congress Tour

1 2 3 4 5 6

☐ I intend to joint the Tour to Agra

I enclose bank drafts on the State Bank of India for

☐ Registration: US \$ 125.-/US \$ 150.-/US \$ 175.-

☐ Hotel deposit: US \$ (minimum US \$ 100.-)

for the (name hotel) (1st choice)

. (2nd choice)

. (3rd choice)

☐ Post-Congress Tour deposit: US \$ (minimum US \$ 100.-)

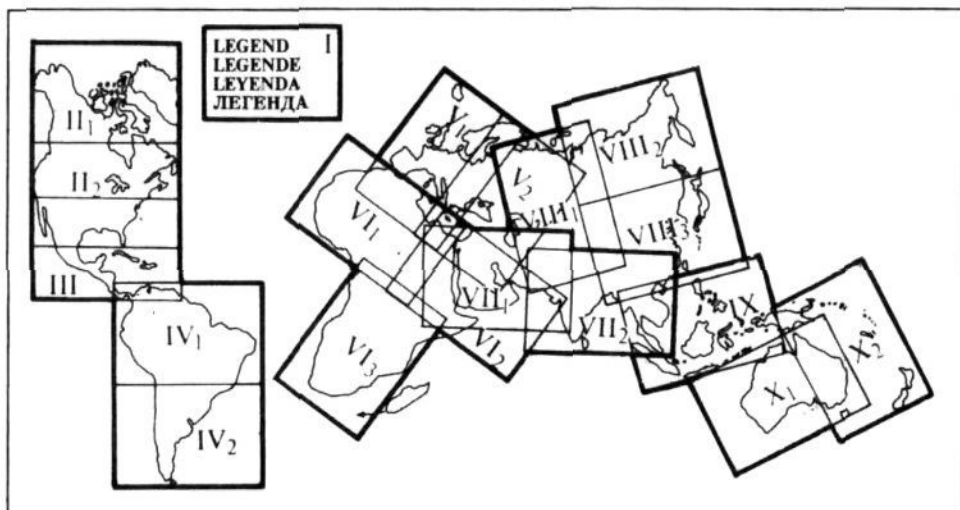
Please note that personal cheques are **not** acceptable.

Place and date:

Signature

SOIL MAP OF THE WORLD CARTE MONDIALE DES SOLS WELTBODENKARTE

1:5.000.000



19 Sheets/
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10 Explanatory texts/
10 Textes explicatifs/
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V 1-2	Europe	n.y.a.	50
VI 1-2-3	Africa (E, F)	75	50
VII 1-2	South Asia (E, F)	46	50
VIII 1-2-3	North and Central Asia (E)	60	50
IX	South East Asia	60	50
X 1-2	Australasia (E)	70	50

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**ACTIVITIES OF THE COMMISSIONS AND WORKING GROUPS
ACTIVITÉS DES COMMISSIONS ET GROUPES DE TRAVAIL
TÄTIGKEIT DER KOMMISSIONEN UND ARBEITSGRUPPEN**

ISSS Commission I

**Report on the
INTERNATIONAL SYMPOSIUM ON SOIL PHYSICS CONCEPTS ON A
FIELD SCALE**

Budapest, Hungary, August 24-29, 1980.

This Symposium, convened by I. Szabolcs (Hungary) and J. Bouma (Netherlands), was organized as part of the yearly meetings of the European Geophysical Society.

Eighteen papers by authors from twelve European countries were presented in two half-day sessions, with some forty participants. The Symposium ended with a plenary discussion.

Virtually all papers dealt with the characterization of water movement in the unsaturated zone, emphasizing field conditions. Ten of the papers presented physical field measurements using tensiometers, neutron probes and other modern techniques. These were specifically applied to calculate: (1) The soil moisture supply capacity to plants; (2) Soil crusting and runoff in an arid region; (3) Water movement in a chalk aquifer and in swelling clay soils, and (4) Movement of dissolved nitrates in heavily fertilized grassland soil. Three papers dealt specifically with various numerical and analytical calculation procedures.

Particular emphasis was given in parts of five papers to the study of water movement in heterogeneous soils with continuous macropores, which occur within a fine-porous matrix (bi-porous system). Specific examples for heavy clay and chalk and a general equation for preferential flow along macropores were presented.

Five papers emphasized use of soil maps and associated soil morphological data, for providing estimates of physical data and for demonstrating regional differences in soil physical behavior. Relations between basic soil physical data (hydraulic conductivity, moisture retention) and soil survey data such as texture, structure, bulk density and organic matter content, were presented. The need to add independently measured pore size distributions to future soil characterization was stressed in one paper.

Four papers covered aspects of field variability of physical properties. Some variability was explained in one study by incorrect measurement and calculation procedures which inadequately reflected the occurrence of continuous macropores. The scale of the object of study and the associated statistical variability should always be specified, allowing variable conclusions when dealing, for example, with soil crumbs (mm); peds (cm); pedons (m) and fields (km). The feasibility of using mapping units of soil survey maps as 'carriers' of physical data was demonstrated in four papers. Some interpolation techniques, including kriging, were applied to point data yielding results which had the same areal variability as predictions based on the soil map.

Significant progress has been made in the last few years in applying soil physical concepts on a field scale. Soil physicists are improving measurement and calculation procedures for field soils, including bi-porous systems. Pedologists are putting more emphasis on physical properties of various soil types and on spatial variability. These developments should continue. Specifically, the following recommendations for future work were made:

- (1) Further development of simple field tests and monitoring techniques for determining soil physical characteristics, such as hydraulic conductivity and moisture retention, and for defining relevant boundary conditions for natural flow systems.

- (2) Further definition of relationships between easily obtainable soil characteristics (e.g. soil texture etc.) and the mentioned soil physical characteristics.
- (3) Further development of theories to define flow phenomena in bi-porous systems.
- (4) Further studies of using soil survey maps for expressing the regional variability of soil physical properties. This will require studies on the homogeneity of mapping units and application of interpolation techniques to boring data.

J. Bouma, Wageningen, the Netherlands

Proceedings of the Symposium will not be published. Abstracts and author's addresses can be obtained from Dr. J. Bouma, Netherlands Soil Survey Institute, Box 98, 6700 AB Wageningen, the Netherlands.

ISSS Commissions I and VI

Report on the INTERNATIONAL CONFERENCE ON SOIL CONSERVATION 80'

National College of Agricultural Engineering Silsoe, Bedford, U.K., July 21-25, 1980

The idea of holding an International Conference on Soil Conservation arose at the Workshop on Erosion Assessment in Europe and the United States, at the University of Ghent, Belgium, in February 1978. The purpose of this follow-up meeting was to critically examine the application of erosion research discussed at Ghent to soil conservation design.

The Conference comprised four sessions from which the summary and review of the contributions were presented by two rapporteurs and commented afterwards by the authors and the audience.

Session 1: Erosion risk assessment/land classification for conservation design.

This session put emphasis on the various methods of erosion assessment (erosion mapping, erosion measurements, land capability classification) as a basis for proper land use and soil conservation design.

Session 2: Conservation: empirical studies.

This session dealt with soil conservation design procedures (terraces) and studies of soil losses from different conservation practices.

Session 3: Conservation practices in erosion models.

Attention was focussed on the validation of soil loss estimation techniques.



Participants of the International Conference on Soil Conservation, Silsoe - England

Session 4: Conservation: economic, social and legal aspects.

Soil conservation techniques were discussed appropriate to village farmlands and river basins with the provision of an adequate extension service.

A special contribution of delegates from China on 'Soil conservation practice in China' drew the particular attention of the audience, as severe erosion problems in the rolling loess area of the Yellow River were illustrated and discussed. Some features of the transportation of sediment in gullies were described and possible soil conservation measures were discussed.

A one-day field excursion provided an opportunity to look at soil erosion in lowland, arable England with particular reference to the rolling landscapes of Bedfordshire and Cambridgeshire. Stops were also made at peatland sites in the Fenland of Cambridgeshire where the depth of peat is rapidly diminishing. The discussion covered rates of wastage, causes of wastages and methods of reducing the rate of peat loss.

The proceedings of this conference 'Conservation 80' including the papers of the participants together with the reviews of the rapporteurs and the general discussions will be published by the beginning of 1981. Further information may be obtained from: Prof. N. W. Hudson or Dr. R. P. C. Morgan, National College of Agricultural Engineering, Silsoe, Bedford MK45 4 DT, England

D. Gabriels, Gent, Belgium

ISSS Commission IV and V

Report on the INTERNATIONAL SYMPOSIUM ON PADDY SOILS

Nanjing, China, October 19–31, 1980

Rice is the staple food for more than half of the total population of the world, and China grows more rice than any other single country. Thus the importance of the soils that produce rice – paddy soils – to the world and to China in particular, is unquestionable. To assess our present knowledge of paddy soils, and their ability to support the greater production of rice that will be essential if the people of China and other Asian countries are to be fed, the Chinese Academy of Sciences (Academia Sinica) through its Institute of Soil Science in Nanjing, arranged a symposium attended by some 150 Chinese soil scientists from all the major rice producing areas of China, and about 60 scientists invited from the International Rice Research Institute, International Fertilizer Development Center, FAO, and 14 other countries, including a very strong representation from Japan. For the first two days of the meeting, papers were delivered at plenary sessions of the Symposium, subsequent to which concurrent sectional meetings were held concerned respectively with Soil Properties, Soil Genesis and Classification, and Soil Management, and one morning devoted to a Poster session. A field trip, a visit to the Institute of Soil Science, two banquets, an opera and a film evening were also fitted into the week. Following the meeting a week-long excursion was held to examine Chinese paddy soils in the field.

While some excellent papers were presented by the invited overseas participants, greatest interest focused on the presentations by the Chinese soil scientists. All presentations were made in English, and discussion facilitated by several of the Chinese soil scientists acting as interpreters. A great deal of information, new at least to Western ears, was presented. There was relatively little emphasis on organic recycling, but much experimental work relating to the efficiency of nitrogen fertilizers, the use of green manures and grain legumes in rotation with rice to economize on fertilizer use, the



The greenhouse for pot-testing of paddy soil fertility, at the Nanjing Institute of Soil Science, Academia Sinica



Examination of a paddy soil profile, after harvesting of the year's second rice crop, and drainage of the fields in preparation for winter wheat growing (see also frontispiece photograph)

place of the water fern *Azolla* and its associated nitrogen fixing *Anabaena* in rice production, and of nitrogen fixation by algae and bacteria found in paddy soils, on the rice plant and in the paddy water. In many of these studies well conceived and conducted use of ^{15}N had been made. They revealed that production increases in China will be increasingly dependent on use of nitrogen fertilizers, although considerable scope exists not only to increase the efficiency of recovery of nitrogen by use of 'ball fertilizers' and placement techniques, but to supplement this by biological nitrogen fixation from several sources.

The intensity with which soils are used is probably greater in China than anywhere else in the world. The need for further rice production is leading to an expansion of the triple cropping system in many areas. While the rest of the world has been looking admiringly at China's efforts in this respect, Chinese soil scientists have been assessing the influence of such intensification on soil properties. There is disconcerting evidence that such changes may be causing a deterioration of soil properties, not yet widely expressed as a loss of yield, although the productivity of a three-crop system may often be only marginally greater than that of a two-crop system, and involve greater labour and other inputs. Interesting information was also provided on the need for proper drainage of many paddy soils, and careful management of their physical properties when they are used for a rice-upland crop succession.

There was inevitably a very lively discussion of the proper classification of paddy soils. Current Chinese and Japanese ideas related to this were described, as well as the ways in which paddy soils are, or could be, accommodated in the USDA Soil Taxonomy and the FAO/UNESCO Legend to the Soil Map of the World. Continuing Chinese contributions to these discussions of the place of paddy soils in international, and national, systems of classification are obviously highly desirable, and steps were taken to ensure that such contributions would be possible. Continuing collaboration between Chinese and others in a range of other aspects of soil science was also planned.

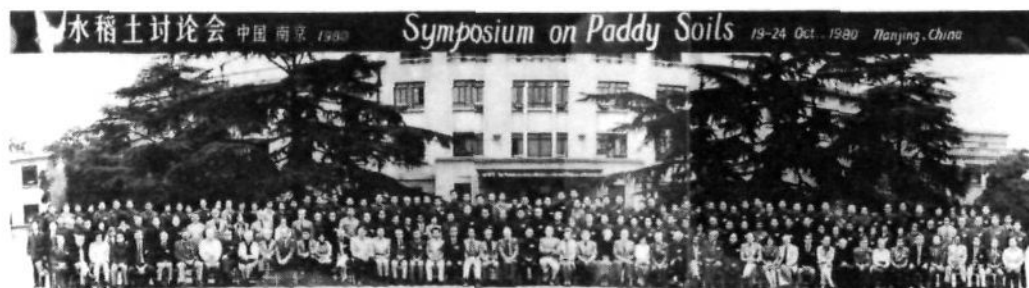
Dr. Jim Thorp, who had worked in China between 1933 and 1936 and wrote the book, 'The Soils of China', was invited to return 'home' for the Symposium, and at the age of 85 was there to describe the early development of soil research in China and comment on subsequent progress. It was interesting that of the original 16 Chinese members of the Division of Soils of the Geological Survey of China, five were present at the meeting, and still held positions of responsibility. They included Drs. Xiong Yi and Li Ching-kwei, respectively Director and Deputy Director of the Institute of Soil Science, and who were largely instrumental in the planning and organization of the Symposium.

The post-Symposium excursion was conducted under exceptionally fine weather conditions from Oct. 25 to 31. About 50 foreign participants were guided by Dr. Xi Cheng-fan and other Chinese soil scientists around the Tai-lake (Nanjing-Yixing-Wuxi-Suzhou-Shanghai-Hangzhou-Nanjing), observing 11 paddy soil profiles and various patterns of agriculture on them. In addition, they enjoyed sightseeing to Wuxi, Suzhou, and Hangzhou.

Varieties of soils studied during the excursion covered all the five paddy soil groups in the Tai-lake region; permeable, stagnating, waterlogged, percolating, and side-bleaching, as named by Chinese scientists. Discussions centered around the following:

- What are the observable profile features brought about by rice cultivation?
- Is it necessary to set up a new class based on these features and if so, at what categorical level?

The very intensive farming systems observed in the course of the excursion were a surprise to most foreign participants. As discussed during the Symposium double and triple cropping (one or two crops of rice plus one winter crop, either wheat, barley, rape or pulse) is the rule rather than exception, even in the lower Yangtze region, which is



situated north of the 30° parallel. Annual cereal output in this system is often about 10 tons/ha. It is clear that such an intensive use of the land has been made possible by very elaborate land consolidation works and by extraordinary efforts by the people. They say that at the time of transition from the first to the second rice, the land undergoes three color changes in one day: from yellow via black to green, which corresponds to the harvest of the preceding crop, plowing and puddling, and transplanting of new seedlings. The efforts of the farmers are also reflected in the soil profiles. In all those observed, there was a surface layer of at least 30 cm that is a recent deposit of artificially incorporated mud-based manures. The excursion provided the foreign participants with a good opportunity to know the land, soil, agriculture and people. The discussions initiated will undoubtedly be continued in subsequent meetings and by correspondence.

For those not fortunate enough to participate in the tour, an excellently illustrated book, 'The Paddy Soil of Tai-Hu Region in China,' published by the Nanjing Institute of Soil Science, and made available at the meeting, provided much information about the soils of the region. The colour photographs, accompanied by detailed soil analyses, are a valuable addition to the paddy soil literature.

The Symposium was undoubtedly a great success and a memorable experience for all those who participated. The organizers are to be warmly congratulated on the excellent arrangements made for the meeting and excursion, the careful selection of papers, and the high standard of presentation that was maintained throughout. The poster presentations in particular were of first class quality, extraneous material being reduced to a minimum and basic results presented in large, clear tables that were immediately and easily assimilable, achieving a standard higher than that reached in many conferences held in the western world. It was pleasing to find a very wide age-spread amongst the Chinese soil scientists, with many eager young faces included in the audience. It was also clear that they knew the western literature much better than the western scientists knew the Chinese literature. This Symposium, soon to be published in full and in English, should do much to make the Chinese work more widely accessible. A very complete Bibliography, prepared by the Nanjing Institute of Soil Science and made available at the meeting, covering both Chinese and other work on paddy soils, should help greatly in this respect. Undoubtedly Chinese soil science has contributed substantially to the present high level of productivity of Chinese paddy soils, which currently yield an average of about 4 t/ha per crop. The closer association of Chinese soil scientists with others should contribute not only to the further improvement of their own production levels, but contribute to raising the production levels of rice in other parts of the world.

D. J. Greenland, IRRI, Philippines and K. Kyuma, Kyoto, Japan

Report on the
FOURTH EUROPEAN CLAY CONFERENCE

Freising, FRG, 8–10 September 1980

European Clay Conferences unite members of the European Clay Groups every 3 years between the International Clay Conferences of AIPEA. This time all East European Groups were also invited and so were the members of Commission VII of ISSS. The conference was organized by the 'Deutsche Ton- und Tonmineralgruppe' esp. by the members of the 'Institut für Bodenkunde' and 'Institut für Mineralogy' of the 'Technische Universität München'. About 250 people from 31 countries attended and 131 talks and posters were presented in 10 technical sessions. Two of these sessions dealt exclusively with clay mineralogy of soils, one of which was chaired by one of the two vice presidents of Comm. VII of ISSS, Dr. de Coninck from Belgium.

Reports dealing with soil clay mineralogy were on amorphous compounds and imogolite, on a kaolinite-smectite mixed layer and a hematite-silicate complex and on the problem of secondary chlorite. Also, the clay mineralogy of a wide variation of soils was described. Interactions between potassium and clay minerals were another topic. A further whole session was devoted to oxides and hydroxides of Fe, Al and Si and papers on opal, goethite, hematite, ferrihydrite and nordstrandite were presented in this session. A special session was arranged on 'Application of Mößbauer Spectroscopy in Clay and Soil Research' introduced by two review lectures and followed by a fair number of technical papers dealing with the application of this rather new technique to soil mineralogy.

During a half day field trip soils on loess, alluvial and tertiary clays were demonstrated and problems of clay mineralogy, smectite properties, potassium fixation, Fe-oxide and carbonate mineralogy were discussed.

An abstract booklet and an excursion guide book is available for DM 15.– from the Institut für Bodenkunde, Technische Universität München, 8050 Freising-Weihenstephan, FRG.

Please make your check payable to: EUROCLAY, c/o Institut für Bodenkunde, Technische Universität München, Freising-Weihenstephan, FRG, or transfer the money to EUROCLAY, account No. 6011780, Bayerische Vereinsbank Freising, Code-Nr. 70021180.

U. Schwertmann, Chairman of Comm. VII. Freising, BRD.



The guest-of-honour at the Nanjing Symposium, Dr. James Thorp, conversing with the Governor of Jiangsu Province Mr. Hui Yu-yu (right)

Report on the
**INTERNATIONAL SYMPOSIA ON MACHINE PROCESSING OF
REMOTELY SENSED DATA, SOIL INFORMATION SYSTEMS, AND
REMOTE SENSING AND SOIL SURVEY**

June 3-6, 1980, L.A.R.S., Purdue University, West-Lafayette, Indiana, U.S.A.

Introduction

In the early stages of planning the Sixth Symposium on Machine Processing of Remotely Sensed Data, an invitation was extended to the International Society of Soil Science (ISSS) to be co-sponsor. In accepting the invitation ISSS assigned two specific Working Groups to participate. The Working Group on Soil Information Systems and the Working Group on Remote Sensing and Soil Survey.

As a result of the above initiative, a joint set of Symposia were held from 3-6 June 1980, hosted by the Laboratory for Application of Remote Sensing (LARS), Purdue University, West Lafayette, Indiana, USA. Symposium chairman was Dr. Marion Baumgardner, presently appointed Associate Director of LARS.

Attendance

Eighteen countries and five international agencies sent 216 representatives to participate in the LARS/ISSS Symposium. The strongest delegation was from the United States of America with 181 participants, out of which 76 participants were connected with Purdue University.

Of the 35 foreign delegates, the largest group came from Canada (8). European interest was illustrated with a contingent of 9 experts from France, FRG, Netherlands, Norway, Sweden, UK and USSR. Further attendance should be mentioned of three countries in South America (Argentina, Colombia and Mexico), two countries in Africa (Ethiopia and Nigeria) and four countries in Asia (China, Japan, Malaysia and Philippines). Also representatives of the following international agencies attended the Symposia: Centro Internacional de Agricultura Tropical (CIAT, Colombia), Food and Agriculture Organization of the United Nations (FAO, Italy), International Development Bank (IDB, USA), International Rice Research Institute (IRRI, Philippines) and the United Nations Environment Programme (UNEP, Kenya).

Programme

Although the Proceedings reflect the special emphasis on the applications of remote sensing to soils, the total range of papers is broad, covering the general areas of data processing analysis, data processing systems, crop inventory, forestry, land use, soil survey and soil information. The Plenary Sessions on the first day focused on the current and future need for land resource information, future earth resource data acquisition systems, current soil information systems, remote sensing and soil survey, and the future challenge of resource data storage, retrieval, analysis and utilization. The Closing Plenary Session highlighted plans for the U.S. operational land satellite program, soil information needs, non-federal information requirements and research priorities for the 1980's.

In addition to the formal presentations several optional half-day field trips were organized midway in the Symposium. These field trips featured field measurements (instrumentation techniques), soil survey, soil information systems and data bases, electronics, and local history. Evening discussions were also scheduled to stimulate a more direct interchange of ideas on specific topics of interest.

Presented papers

The long Symposium title implied the contribution of a widespread number of projects, suggestions, considerations, perspectives, etc. all related to the soil properties that can be detected in or derived from remotely sensed data.

In fact not all the aspects presented dealt with digitised information. The proceedings distributed at the start of the meetings contained most of the texts to be discussed with the exception of the readings of the plenary sessions. In total and summarized as such, people were confronted with 30 long and 26 short papers during the four days the symposium lasted. Four distinct sections were projected that incorporated more or less non-overlapping subjects. Due to the very detailed treatment and the increasing attention to the more fundamental problems, more specifically in the data handling, one can conclude that this was really an important technical symposium. Aside from the mathematical techniques being explained, some of the more physical backgrounds on the one hand and some of political and management involvements on the other hand were not forgotten. The atmosphere for discussion was very open and contrasted a bit with the hurricane-like atmosphere outdoors at the first day.

Sessions on Soil Information Systems

The Working Group was formally represented by its secretary, Stein W. Bie of Norway, who in the opening plenary session reviewed the progress made during the last 10 years in the construction of and production with soil information systems. Soil data have proved to be difficult sets of information to handle within the available standard hardware/software computing systems. In particular the capture of data from soil field descriptions has constituted a bottleneck. Many solutions have been sought, ranging from strict fixed-format numeric coding to the automated interpretation of more conventional free-language descriptions. With poorly disciplined soil survey records the former approach has proved most successful, although the latter offers much promise. Economic production of soil maps by computer-aided means has been difficult to achieve, but the new methods have given rise to more derived soil maps than was previously the case. Soil information systems have exposed basic theoretical problems in the sampling and manipulation of soil data, but little of the theoretical work done has yet penetrated the survey organisations. Bie was doubtful whether soil information systems in its current form could contribute significantly to the introduction of powerful methods for data handling in non-industrialized countries. However, the advent of micro-computers also in this field, allows in principle the production of standard, low-cost robust systems. Such systems, where experience of the pioneers in this field is 'black-boxed', may be of use in environments where extensive support for advanced systems is otherwise not available. Such systems may also be of interest in the industrialized world. Finally, a brief overview of soil information systems operating in Australia, France, Canada, USA, Britain, West-Germany, the Netherlands and within the FAO was given.

In the final plenary session Gordon L. Decker described the US system in detail, noting in particular the improvement in standardization of description and mapping practice, and the contributions made by the advanced system for computer-aided mapping. The ability to present the user with varied interpretive maps was valued highly. With the installations of systems at different places in the USA a degree of decentralization was achieved.

In a series of technical sessions on aspects of soil data collection and handling, a number of papers related to the detection of soil water and salt status by remote sensing. Fukuhara and colleagues from Japan stressed the importance of calibration of soil moisture status through time, and the time series aspect in both the imagery and ground truth. Cooper and Coiner from the US presented interpretations from a single set of



Also attention to less remote and less systematic matters: an evening at Fort Ouiaenon Park, Indiana

Landsat data for salinization studies – clearly both river flow, crop status and short-term climatic conditions created difficulties for their studies on the Upper Nile. Park, also from the US, had looked at the more basic problem of defining a soil moisture reflectance model in visible and infra-red bands, and had obtained promising results using multivariate techniques, with verification in the laboratory. Schreier and Lavkulich from Canada were looking at physical and chemical characteristics of soils, and in order to obtain a wide variety of properties they chose 58 mine tailing samples from 15 mines in British Columbia. Using clustering techniques they were able to identify different spectral categories related to chemical composition. In particular iron, carbon, silica and aluminium proved helpful parameters. Wang and colleagues at Goddard Space Flight Center, USA, reported successes in using micro-wave radiometers for soil moisture studies of bare soil, but noted the reduction in sensitivity of the soil moisture sensing from 30 to 90 %, depending on wavelength. Colleague Schmugge reported in detail on such soil moisture sensing and outlined NASA's proposals in this field. Johannsen, USA, and Da Costa, Brazil noted possibilities of using colour/reflectance to aid in soil field work for texture, organic matter and moisture, in soils of the US Great Plains. Similar conclusions were drawn from a West-German study presented by Lamp in different landscapes in Northern Germany. By combining conventional stereo-interpretation of air photographs with 11-channel multispectral remission and multitemporal thermal emission ($3 \times$ /day), considerable reduction in field work for soil survey was noted.

This latter aspect was the topic of a field excursion in Jasper County, Indiana, with a joint LARS/Soil Conservation Service study on soil mapping. In the visited landscape the soil surveyors could report significant benefit from combining Landsat images with ordinary field work, thereby reducing the sampling required. Participants to the excursion were offered convincing examples of types of landscapes where this had been done, and were generously equipped with the basic material to enable a critical evaluation of the results.

In the technical sessions a number of papers were more directly covering the design of soil information systems. Anderson, Stevens and Heil from Colorado State outlined the ambitious plan for a comprehensive soils resource information system, built around a commercial data base management system. Careful studies of user requirements indicated that the linkage of files from any agencies is required to produce the data necessary. The project is now moving into the prototype stage. Kosaki and Kyama from Japan also showed how standard software could be used to build a soil information system, here with much emphasis on SPSS, and that the major problems were associated with obtaining standardised input from soil scientists. In a detailed paper Tilmann and Mokma from Michigan, USA, outlined the use of raster-type maps for planning. One particularly interesting aspect was the announcement of the system being implemented on \$ 4,000.-micro-computers. Sykes and Petersen, from Pennsylvania, USA, demonstrated a versatile polygon mapping system for soil maps, particularly useful for derived maps.

Finally, Garbouchev from UNEP outlined that Organization's plans for a global land/soil productivity and environment monitoring system, which impressed the delegates with its level of ambition and potential usefulness. His plea for support from soil scientists operating in this field should not be overlooked.

In connection with the poster sessions the ISSS posters on soil information systems were on display, and members from the organizations whose systems are described there were at hand to explain in detail the systems.

A natural interface between soil information systems and the techniques of remote sensing seems now to be developing, and the Working Group on Soil Information System is grateful to LARS for its efforts to facilitate this through this set of symposia.

Sessions on Remote Sensing and Soil Survey

The different presentations of the symposium can be split in those that deal with the physical content, and the transition to variations in signal strength; the digitalisation directed towards classification and patterns building; the specific fields of applications, soils, forestry and the developmental scenery detection, with emphasis on deforestation, erosion, and salinisation. In the last groups some information was given with respect to the field checks or relation to field-defined parameters, including crop inventory.

There were quite long discussions on the scale and the correction for cartography purposes, together with the time and cost effectiveness. Stress was laid upon steps between executive systems and their requirements to minimize execution time. The introduction of multi-microprocessors was defended and demonstrated; this differs essentially from another method, viz. the use of color images directly or indirectly. Attention was asked for data service organization and what is called pilot systems. These last ones act as test beds to evaluate specific fields of application and integrate network concepts, data access, etc.

With respect to soils much work has been done in the classification based on multispectral data, relative to defined soil series incorporating pattern recognition techniques to delineate surfaces. Those pattern-defining methods were implemented in computer handling of data, where principle component transformation took place first to enhance contrast stretch. The periods bare soils can be observed from space often limits, but the incorporation of specific vegetation species enhances the results of series classification considerably.

The assessment of data for estimation of areas of crops was studied in much more detail. Comparisons were made between multitemperal and multichannel treatment. The inclusion of flight data to failing satellite observations in order to complete interpretation was tried and evaluated. After three dates 90 percent accuracy was obtained for corn and soybean.

For the first technique a new development is the introduction of radar data leading to the conclusion that the combination of multispectral and radar data is superior to either one of those bands. One radar frequency and two polarisations will help in discrimination accuracy. Advances can still be made incorporating the feature combination relative to dependence of sensor variables. New atmospheric corrections were tested, based on the calculation of path radiances. Sun-angle corrections were not used, because the images obtained between 10.00 and 15.00 hr. were taken. Very high correlations with rangeland plant communities were found.

In addition to the data handling, the physical parameters in the distinct bands got much attention. Theoretical modeling showed the importance of linearly polarised light as an additional feature, more especially for crops. Further research was suggested.

Two interesting papers dealt with the phenomena relative to salinisation of bare or vegetated soils, in Mexico and the upper Nile river zone respectively. The combination with hydro- and geomorphological models seem to promote correctness and a better understanding. The number of necessary field checks was amply discussed.

Radar as a tool in remote sensing of soil and crops has many advantages and can be applied in a passive or an active way. The usefulness is enhanced by the insensitivity for weather conditions, and so too for night time. It requires a special image processing technique as a consequence of the coherent nature of the sensor. New programmes to meet these consequences were developed and applied to Seasat-A SAR imagery. The complex mathematical problems were solved adequately, introducing the use of SAR-images to test a minimum means square error. The quantitative evaluation is currently underway.

The plenary sessions dealt more especially with two topics viz. the importance of remote sensing systems for less developed countries and the place of the industrial designers. The first subject was attacked by some representatives, partly studying in the

USA, but defended by the representatives of FAO. Optimistic perspectives were transferred to the audience indicating the (economic) importance of global surveys. The needs for food and conservation of the natural environment are very urgent, as stated by Dudal in his opening address on future global information needs for land resources.

A critical evaluation of the scientific energy devoted to the various subjects and problems of the current projects cannot be given easily. It is quite certain that the search for correlation between distinct soil parameters becomes over-emphasised. In one of the texts some seventy specific soil properties were correlated with MSS-data, while a study of the physical importance or a modelling in a physical sense was omitted.

It should also be concluded that the gap between the researchers of the basic physical aspects and the so-called applicants is rapidly growing. The specific requirements as defined by the latter group may be taken as guiding principle. A cause for concern, too, is the relatively small attention for information streams obtainable in the larger wavelengths and the modern active systems.

The appearance of a booklet in that same week with a catalogue of soil reflectance spectra invited indirectly a few participants to look for standardized values.

S. Bie, Oslo, Norway;

F. W. Hilwig, Enschede, the Netherlands;

A. R. P. Janse, Wageningen, the Netherlands.

The Proceedings of the LARS Symposium can also be obtained from the Secretariat of ISSS (c/o ISM, P.O. Box 353, Wageningen, the Netherlands). The price, including surface mail charges, is US\$ 25.- or equivalent.

Les Comptes-rendus du Colloque LARS peuvent être obtenu aussi du Secrétariat de l'AISS (chez ISM, B.P. 353, Wageningen, Pays-Bas).

Le prix, port d'envoi de surface compris, est US\$ 25.- ou équivalent.

Der Bericht des LARS Symposiums ist auch erhältlich beim Sekretariat der IBG (p.A. ISM, Postfach 353, Wageningen, Holland).

Der Preis, Überlandpost/Seepost porto einbegriffen, beträgt US\$ 25.- oder den Gegenwert.

ISSS Working Group on Land Evaluation

Report on the IUFRO/ISSS INTERNATIONAL WORKSHOP ON LAND EVALUATION FOR FORESTRY

November 10–14, 1980 – Wageningen, The Netherlands

General

This meeting was organized jointly by our society and the International Union of Forestry Research Organizations. There were about 50 participants from 17 countries, with roughly equal numbers from forestry and soils backgrounds. The excellent facilities of the International Agricultural Centre (IAC) were made available, and visits were arranged to the International Soil Museum (ISM), the Dorschkamp Research Institute for Forestry and Landscape Planning, the International Institute for Aerial Survey and Earth Sciences (ITC) and the Lake IJssel Polders Authority.

The subject is topical because large areas of tropical forest and woodland are being felled, and much is converted to farmland and pasture, while at the same time increasing acreages are being planted in many countries to provide fuelwood or methanol as well as timber and pulp. The role of woodland in environmental protection and recreation is also widely recognized. There is, therefore, increasing interest in classifying the suitability of land for multipurpose forestry uses (as witness, for example, the conference on Forest Land Assessment and Management for Sustainable Uses in 1979 in Hawaii).

The meeting was designated a Workshop rather than a Symposium because of the intention to work out some proposals for widely acceptable methods. Although the time following the presented papers was all too short, the evenings provided further scope for discussion and the field excursions gave opportunities to examine the application of principles on the ground. On the last day, four working groups examined the conclusions and prepared recommendations for future action.

Papers Presented

Sixteen invited papers were presented; they fell into several categories. An illuminating introduction was provided by accounts of the dynamics of forest ecosystems in tropical and cool regions in relation to their utilization. Then experiences in inventorying forest land resources were described. The range of natural conditions and ways of characterizing them were made clear by the paper describing FAO's experience in the developing countries and by the accounts of the various methods used in the USA, Scandinavia and other temperate countries.

Then the meeting turned to consideration of methods for evaluating the suitability of land for various forest uses. The application to forestry of the concepts and methods set forth in the *Framework for Land Evaluation* (FAO, 1976; ILRI, 1977) formed the basis for this discussion. The significance of land qualities to growth, forest management and conservation of the environment for specific forest land-use types was emphasised. Some examples of applications were given, including one opinion that the use of land for forestry in Central Europe was so deeply imbedded in historical and social conditions that evaluation of current land suitability was not possible with existing planning data and techniques.

Conclusions and Recommendations

From the papers and discussions it was evident that participants with a forestry background were mainly concerned with inventory procedures and interpretations of

prominent site characteristics for management purposes. The participants with soil science and land evaluation background tended to take inventory for granted and were concerned with improved methodology for interpreting basic natural resource data in terms of suitability for sustained economic production, and other purposes, as an essential prerequisite for multipurpose land-use planning. Both groups would benefit from aggregating their specialist information.

There was general agreement that a practical and widely acceptable method of evaluating land suitability for forest uses would be beneficial. The Framework for Land Evaluation would provide an acceptable basis provided that adaptations of detail are made to cope with the special features of forestry as compared with agriculture.

The meeting strongly recommended a continuation of close collaboration between foresters, soil scientists and other specialists in the development of land evaluation for forestry.

Specific recommendations included: suggested ways in which basic data could be inventoried with the aim of making the diverse methods at least compatible with one another; selection and definition of forest land utilization types and research and documentation on their requirements in terms of land qualities; methods for prescriptive land evaluation for planning multipurpose forest-land use and forest management; integration of soil and water conservation and environmental improvement with forestry in land evaluation.

Recommendations for future action included the preparation of draft guidelines for land evaluation for forestry, for international comment and testing under case-study conditions, and publication as soon as an internationally acceptable form is achieved. It was also recommended that a joint IUFRO/ISSS Working Group should be established in order to coordinate collaboration and research on land evaluation for forestry, presentation of results at international meetings, training programmes etc.

These extensive recommendations and the detailed workplan for making them effective will form part of the Proceedings of the meeting, to be published by the International Institute for Land Reclamation and Improvement (ILRI), P.O. Box 45, Wageningen, the Netherlands.

In conclusion the organizers of this successful meeting are to be congratulated for this useful initiative in interdisciplinary cooperation and it is to be hoped that future developments will fulfill the promise of this beginning.

M. F. Purnell, FAO, Rome

References

FAO, 1976: A framework for land evaluation. FAO Soils Bulletin No. 32. 72 p. (Also ILRI 1977. Publication 22. 87 p.).

Qureshi (ed), 1980: Assessing tropical forest lands: their suitability for sustainable uses. East-West Environment and Policy Institute, East-West Center, Honolulu, Hawaii. 69 p.

Communication from the Working Group 'Remote Sensing & Soil Survey'

The Third Symposium of the Working Group 'Remote Sensing and Soil Survey' of the ISSS will be held in Warsaw, Poland, from 1st to 6th June 1981. Organizers: the Polish Society of Soil Science and the Institute of Applied Geodesy of the Technical University of Warsaw.

Information: Dr. Stanislaw Bialousz, Sympozjum Teledetekcji, c/o Polskie Towarzystwo Gleboznawcze, ul. Wiśniowa 61, 02-520 Warszawa.

Soil scientists who are interested either to be informed or to join actively the Working Group are requested to contact its chairman Dr. M. C. Girard, or the Secretary Ir. F. W. Hilwig (see addresses below). It will be appreciated if the topics of interest, and a copy of one's (list of) publications on the subject can be attached.

Copies of the Proceedings of the first Symposium on Remote Sensing and Soil Survey (Rome 1977) can still be obtained from the same officers, or from the ISSS Secretariat in Wageningen (Price 90 FF, or Dfl. 36,-). The Chairman has also available on request free copies of a paper on 'Education and Research on Remote Sensing for Soil Survey', prepared for the Working Group by Dr. M. A. Mulder.

Addresses/Adresses/Adressen: Dr. M. C. Girard, Laboratoire de Pédologie, Institut National Agronomique Paris-Grignon, 78850 Thiverval-Grignon, France.

Ir. F. W. Hilwig, ITC, 144 Boulevard 1945, P.O. Box 6, 7500 AA Enschede, the Netherlands.

Communication du Groupe de Travail 'Pédologie et Télédétection'

Le troisième Colloque du Groupe de Travail 'Pédologie et Télédétection' de l'AISS sera fait à Warsaw, Pologne, du 1^{er} au 6^{ème} juin 1981.

Organisateurs: L'Association Polonaise de Science du Sol, et l'Institut de la Géodésie Appliquée de l'Université Technique de Warsaw.

Information: Dr. Stanislaw Bialousz, Sympozjum Teledetekcji, chez Polskie Towarzystwo Gleboznawcze, ul. Wiśniowa 61, 02-520 Warszawa.

Les pédologues qui voudraient être informés du Groupe de Travail ou qui en voudraient participer activement, sont demandés de contacter son Président Dr. M. C. Girard ou son Secrétaire Ir. F. W. Hilwig (voir les adresses dessus). Il sera apprécié quand les sujets d'intérêt et des copies de leur (liste de) publications sur ces thèmes sont inclus.

Les Comptes-rendus du premier Colloque sur les applications de la Télédétection en science du sol (Rome 1977) peuvent être obtenus toujours chez les mêmes représentants, ou le Secrétariat de l'AISS à Wageningen (Prix 90 FF ou Dfl. 36,-). Le Président est jouissant d'un article préparé pour le Groupe de Travail par M. A. Mulder 'Education and Research on Remote Sensing for Soil Survey' dont des copies sont à votre disposition gratuit sur demande.

Bericht der Arbeitsgruppe 'Fernerkundung für Bodenkartographie'

Das dritte Symposium der Arbeitsgruppe 'Fernerkundung für Bodenkartographie' der IBG wird organisiert werden in Warschau, Polen, vom 1. bis 6. Juni 1981.

Organisatoren: Die Polnische Bodenkundliche Gesellschaft und das Institut der Angewandten Geodäsie der Technischen Hochschule Warschau.

Information: Dr. Stanislaw Bialousz, Sympozjum Teledetekcji, p.A. Polskie Towarzystwo Gleboznawcze, ul. Wiśniowa 61, 02-520 Warszawa.

Pedologen die interessiert sind entweder Information zu bekommen, oder aktiv in die Arbeitsgruppe teil zu nehmen, werden gebetet Kontakt aufzunehmen mit dem Vorsitzender Dr. M. C. Girard oder dem Sekretär Ir. F. W. Hilwig (siehe die Adressen wie unterstehend). Es wurde geschätzt werden als die Besonderbereichen und Kopien (einer Liste) Ihrer Publikationen auch angegeben werde.

Die Verhandlungen vom ersten Symposium über Fernerkundung für Bodenkartographie (Rome 1977) sind-nach wie vor-erhältlich bei dieselbe Vertreters, oder beim Sekretariat der IBG in Wageningen (Preise 90 FF oder Dfl. 36,-). Für die Arbeitsgruppe ist ein Aufsatz 'Education and Research on Remote Sensing for Soil Survey' geschrieben von Dr. M. A. Mulder. Der Vorsitzender stellt diesen Aufsatz auf Anfrage gratis zur Verfügung.

Addresses/Adresses/Adressen: Dr. M. C. Girard, Laboratoire de Pédologie, Institut National Agronomique Paris-Grignon, 78850 Thiverval-Grignon, France.

Ir. F. W. Hilwig, ITC, 144 Boulevard 1945, P.O. Box 6, 7500 AA Enschede, the Netherlands.

Communication from the Working Group on 'Soil Information Systems'

The fifth Symposium of the Working Group will be held in Paris, France, from 14th to 17th September 1981.

The information system aspect has been treated at the first four symposia (Wageningen 1975, Canberra 1976, Varna 1977, Purdue 1980). The present one will concentrate on the soils aspect, including the statistical analyses of soil data, the management of data banks and the development of simulation methods.

Details of the meeting, with a 'notice-of-intent' form, has already been given, in english and french, on a loose-leaf inserted in ISSS Bulletin no. 57.

Communication du Groupe de Travail 'Informatique en pédologie'

Le cinquième Colloque du Groupe de Travail sera organisé à Paris, France, de 14ième au 17ième septembre 1981.

L' aspect informatique est traité pendant les quatre Colloques précédent (Wageningen 1975, Canberra 1976, Varna 1977, Purdue 1980). Le Colloque actuel se concentrera sur les aspects des sols, l'analyse statistique des données du sol y compris, le direction des banques des données et le développement des méthodes de simulation.

Les détails du Colloque, avec un formule 'avis-d'-intention', sont déjà communiqués en anglais et francais sur une feuille de tirer, inséré au Bulletin no. 57 de l' AISS.

Bericht der Arbeitsgruppe 'Informationssysteme in der Bodenkunde'

Das fünfte Symposium der Arbeitsgruppe wird in Paris, Frankreich, organisiert worden vom 14. bis 17. September 1981.

Der Aspekt des Informationssystems ist im ersten vier Symposions dargestellt worden (Wageningen 1975, Canberra 1976, Varna 1977, Purdue 1980).

Das heutige Symposium wird sich konzentrieren auf den Bodenaspekt, die statistische Analyse der Bodenangaben einbegriffen, die Führung der Angabenbanken und die Entwicklung der Simulationsmethoden.

Die Einzelheiten der Tagung, mit ein 'Anzeige-der-Intention' Formular, sind bereits mitgeteilt, in english und französisch, auf ein Einlägeblatt in den IBG Mitteilungen no. 57.

IN MEMORIAM

Professor Dr. A. V. Sokolov (1898–1980)



Prof. Dr. A. V. Sokolov, corresponding-member of the USSR Academy of Sciences, Honorary member of the All-Union Society of Soil Scientists, member of the International Soil Science Society, passed away on September 4, 1980, at the age of 82 years. The Soviet soil science has lost one of the greatest specialists in the field of agrochemistry.

Born in 1898 in town Balashov, Saratov region, A. V. Sokolov graduated from the Timiriazev Agricultural Academy in 1922 and carried out his first researches at the Engelgard's and the Polesje experimental stations. His works on soil phosphorus adsorption, on adsorbed aluminium, on increasing the soddy-podsolic soil fertility, as well as on the methodological questions of the study of physical soil properties and the microdynamical

method of soil fertility evaluation, have found a further development at the Institute of Fertilizers and Insectofungicides, in which Prof. Dr. A. V. Sokolov headed the Department of Phosphorus, and later at the Dokuchaev Soil Institute, where he was a chief of the Laboratory of Agrochemistry. In both institutes A. V. Sokolov set up trained creative bodies of agrochemists and conducted the research works, which have been recognized in the USSR and abroad. All these works are a great contribution to the gold-fund of agrochemical science. In 1946 academician D. N. Prianishnikov wrote about his pupil: '... Breadth of scientific interests, versatile great erudition, original investigations in the field of agrochemistry, plant nutrition physiology and soil science allowed to A. V. Sokolov to become a great scientist'.

Becoming a leading agrochemist in the USSR, A. V. Sokolov coordinated successfully a great number of important problems in agriculture, being based on studies of nitrogen, phosphorus, potassium and magnesium regimes in different soils, as well as the development of soil fertility and geographical regularities of fertilizer effects. It is notable that the first published work of Prof. Dr. A. V. Sokolov was devoted to phosphorus and that he was true to that element during all 57 years of his scientific activity.

A. V. Sokolov was a great organizer of agrochemical science, giving much attention to training of specialists in the field of agrochemistry. For his outstanding contributions to the development of agriculture A. V. Sokolov received the Government's awards and prizes.

We all shall long remember A. V. Sokolov's wide vision, infectious enthusiasm and his scientific creativity, but possibly most of all his true friendliness, vivacity and humanity. He was a person of great soul, a person with great sense of humor and therefore he was liked and admired by all. Having left the family of Soviet soil scientists with the feelings of sadness and gratitude, Prof. Dr. A. V. Sokolov will never be forgotten by all who knew him.

All-Union Society of Soil Scientists, Moscow, USSR.

Correction:

The late Prof. A. A. Rode (see In Memoriam of Bulletin 57) was elected Honorary Member of ISSS at the Adelaide Congress of 1968, not at the Moscow Congress of 1974.

Georges Bryssine (1909 – 1980)

Le 1er octobre 1936, âgé de 27 ans, Georges Bryssine arrivait à Rabat au centre de Recherches Agronomiques du Maroc, engagé en qualité de pédologue par M. E. Miegé alors directeur.

Né à Ouralsk en Russie, Georges Bryssine avait suivi, à la suite de la révolution bolchevique de 1917, sa famille à Paris où il a pu continuer ses études et passer sa licence de science (1932), malgré des conditions matérielles difficiles – il fut l'élève de L. Lutaud, J. Bourcat, V. Agafonoff et V. Malychef.

Après ses études, il demeura quatre années en France, mais resta profondément russe (il a gardé toute sa vie son statut de réfugié) il lui manquait les grands espaces et la découverte de nouveaux horizons. C'est pourquoi il partit pour le Maroc auquel il s'attacha passionnément : les gens, les paysages, le mode de vie lui rappelaient en partie les pays de son enfance.

Pendant 44 ans, il a poursuivi inlassablement l'étude des sols du Maroc. Il a été incontestablement le créateur et l'animateur persévérant de la pédologie marocaine. Ayant débuté comme chimiste, il devint trois ans plus tard chef du laboratoire d'étude des sols, puis chef de la Station de base de Pédologie à l'I.N.R.A.M à partir du 1er janvier 1963, et enfin responsable du laboratoire de physique des sols à partir de 1974.

Jusqu'à sa mort, il n'a pas cessé de travailler. Souvent en reconnaissance, et en prospection sur le terrain, il trouvait le temps d'écrire de nombreux articles et études. Tous ceux qui le connaissaient et avaient besoin d'aide, savaient alors où le trouver : à son bureau sa machine à calculer sur sa table, il était toujours prêt à vous accueillir avec beaucoup de chaleur et de gentillesse. Aimant rendre service, il était facilement disponible à tous. Heureusement que près de lui, sa femme et collaboratrice (Mme Irène Bryssine-Docteur en Sciences, responsable du laboratoire de microbiologie des sols à Rabat) savait avec humour et adresse canaliser son enthousiasme et son dévouement.

Sur les directives de MM. Miegé, Grillot, El Ghorfi, il a organisé les laboratoires d'analyses et de recherches de physique, de chimie et de microbiologie des sols, en même temps qu'il réalisait la prospection et la reconnaissance des sols du Maroc, soit lui-même, soit avec l'aide d'équipes de pédologues. Il est incontestablement à l'origine de la cartographie à moyenne et petite échelle du Haouz – du Taddla – des Doukkala – du Gharb...

Les problèmes surgis au cours de ces longues courses à travers le bled marocain l'ont conduit tout naturellement à une importante série d'études qu'il a publiées dans les cahiers du Centre de Recherche de Rabat, de la Société des Sciences Naturelles du Maroc où il était président de la Section de Pédologie, ainsi que dans les actes de nombreux colloques et congrès internationaux auxquels il a participé.

A la lecture de la liste de ses publications (plus de 70 articles) il apparaît qu'il a toujours porté un intérêt passionné aux propriétés physiques des sols : couleur – structure – caractéristiques hydriques – salure, et à leur importance dans la mise en valeur des périmètres irrigués, avec une attention plus marquée pour les tirs (vertisols), sols typiques de la grande plaine alluviale du Gharb. Il a eu également l'idée d'une classification des sols basée sur les régimes hydriques.

Jusqu'à la fin de sa vie, il a toujours eu la jeunesse d'esprit nécessaire pour engager ou suivre de nouvelles actions : ainsi il a été chargé de la coordination des programmes de recherches sur la culture du théier, et naturellement, il avait pris à sa charge ceux concernant le travail du sol – il a été, avec toute une équipe de jeunes pédologues marocains, un des créateurs de l'AMSSOL : Association Marocaine des Sciences du Sol et un rédacteur fort apprécié de la revue marocaine de pédologie ATTORBA.

Sa renommée scientifique dépassait les frontières marocaines : la pédologie nord-africaine et internationale (particulièrement française) lui doit beaucoup. Grâce à lui,

des tournées passionnantes et animées ont pu être effectuées à travers le Maroc. En particulier il fut l'organisateur à la demande de M. Antonio Guerra, de celle qui eut lieu après la réunion de la V-me commission de la Société Internationale de la Science du sol à Madrid en 1966.

Le Maroc perd en Georges Bryssine un homme de science de tout premier plan, qui sut donner à la pédologie marocaine une place importante dans le concert international.

Pour tous les services rendus, son pays d'adoption lui décerna la décoration du Ouissam Alaouite au titre d'officier – L'Académie d'Agriculture de France lui accorda le prix de la Fondation 'Xavier Bernard' pour le remercier du rôle toujours loyal et efficace qu'il sut jouer dans la collaboration scientifique du Maroc et de la France.

Puisse son souvenir rester pendant longtemps un exemple de courage et de rigueur scientifique à la jeune pédologie marocaine.

J. Decroux, Toulouse, France



Dr. Servio Tulio Benavides Rivera (1927–1979)

On the 25th of November 1979 Dr. Servio Tulio Benavides Rivera died at the age of 52 years.

He was president and co-founder of the Colombian Soil Science Society, which nominated him Honorary President in September 1979.

He was also the founder of the soils laboratory of the national geographical institute 'Agostin Codazzi' (IGAC), and its chief till 1961. After a stay with the FAO project on the edaphologic studies of the Llanos Orientales from 1961 to 1963, he became instrumental in the creation of the Centro Interamericano de Fotointerpretación (CIAF) in Bogotá. He was the chief of its Soils Unit from 1970 till 1977, when he became the Academic Secretary and acting Director of the Centre.

Dr. Benavides was born in Yacuanquer in the Department of Nariño, Colombia on the 4th of February 1927. After his primary and secondary education he left Nariño to study at the National University of Colombia, of which the Agronomy Department granted him the title of Ingeniero Agronomo in 1953. He continued his studies by following various courses in the USA where he received the title Master of Science of the Oklahoma State University in May 1962. In 1968 he followed the soil survey course of CIAF which he finished with the qualification 'Excellent'. At the University of North Carolina he finished his studies by obtaining a Ph. D. degree in 1973.

During his scientific career he was a tireless worker who published numerous works, several of which were honoured with scientific awards. He performed soil surveys throughout Colombia and especially in Northern coastal region and the Department Tolima. Apart from his teaching work at CIAF where hundreds of soil scientists from all over Latin America benefitted from his great dedication, he also was active in the graduate courses of ICA – Universidad Nacional.

The Colombian community of soil scientists has lost in him a great scientist of exceptional capacity. His colleagues from CIAF have lost in him a friend and leader whom they owe much both scientifically and personally. His foreign colleagues will remember him for his great dedication and warm personality.

G. W. W. Elbersen/N. Nieuwenhuis, ITC, Enschede, the Netherlands.

Professor Stephan Ziemnicki (1912–1979)

On April 3, 1979 the sudden death occurred of Professor Stephan Ziemnicki, aged 67, for many years the Director of the Department of Melioration and Agricultural Architecture of the Agricultural Academy in Lublin, a meritorious university teacher and an expert in the field of soil protection against erosion.

Stephan Ziemnicki was the first in Poland to broadly develop scientific research on water erosion of soil; he also elaborated and carried out a number of programmes for soil protection against erosion, on both experimental and industrial scales. He not only carried out numerous agricultural programmes in arable fields, but also afforestation programmes in ravines and on open mine dumps.

In his scientific discipline, he was the best specialist in all of Poland and also one of the best in the world. His list of publications counts as many as 180 papers, out of which 90 are original scientific dissertations. He also published three handbooks on the protection of soils against erosion.

Stephan Ziemnicki was a member of numerous scientific bodies and societies, holding in them many important posts. He was the Deputy President of the Committee on Erosion and Sedimentation of the International Hydrogeological Society and a member of the International Society of Soil Science.

Stephan Ziemnicki was a true scientist, a solicitous tutor and a perceptor of young scientific workers. For the share he had in the development of Polish soil science, he was honoured with the golden award of the Polish Soil Science Society.

Polskie Towarzystwo Gleboznawcze, Warsaw, Poland



Professor Dr. E. V. Rubilin (1904–1979)

Professor Dr. E. V. Rubilin, an outstanding soil scientist, passed away on the 13th October 1979.

Born 22 February 1904 in Astrakhan he graduated at the Agricultural Institute in Ordzhonikidze and received his Doctor's degree there. Working since 1959 in Leningrad, Prof. Dr. Rubilin became head of the chair of Botanical Geography at the Leningrad State University and held this position until the end of his life.

Over the years Professor Rubilin established himself as a competent researcher. He published over 150 scientific papers and books. He was a great connoisseur of soils in the Northern Caucasus and his monography 'Soils of Foot-Hills and Lowlands in Northern Osetya' is well-known. Many years of his life were devoted to the study of soil age with the help of the radiocarbon method. He also studied the nature and geography of

the soils in the northern and north-western European part of the USSR, and paid great attention to the water-logged soils and the methods of their reclamation.

Having educated the younger generation of soviet soil scientists, Prof. Dr. Rubilin laid the foundation of modern soil science and geography development in the USSR. Prof. Dr. Rubilin took an active part in organizing various scientific meetings, both national and international, and participated at different international symposia, conferences and congresses of soil science and geography. He was a member of the International Society of Soil Science. Appreciation of Prof. Rubilin's scientific activity has been demonstrated by numerous awards, medals and orders. His work will live after him and be appreciated by the coming generations.

Having left the family of soviet soil scientists with a feeling of sadness and gratitude, Prof. Rubilin will never be forgotten by his former students and colleagues.

All-Union Society of Soil Scientists, Moscow, USSR.



Professor Lambert Wiklander (1910–1979)

Nordic clay and soil research suffered a heavy loss on September 27, 1979, when Professor Emeritus Lambert Wiklander died suddenly at the age of 69 years.

He was born in Viksjö parish, Ångermanland, and received his academic education at the Royal Agricultural College of Sweden, where he earned a doctoral degree in 1946. When Prof. Sante Mattson retired in 1951, Dr. Wiklander was appointed professor of soil science.

Even as an undergraduate student, Lambert Wiklander had the opportunity to do research under the guidance and inspiration of Prof. Mattson. His first research work with Mattson on the amphoteric behavior of soils had a strong influence on his future work.

Lambert Wiklander was extremely productive as a scientist. He published more than 100 scientific papers covering a wide range of topics. His doctoral dissertation, entitled 'Studies on Ion Exchange with Special Reference to the Conditions in Soils', made him internationally known as an authority on ion exchange theory. He also made significant contributions to our knowledge of the chemical and mineralogical properties of Swedish soils; weathering and soil formation; phosphorus, potassium, and magnesium fixation; the effect of liming on the chemical and physical properties of soils; the composition of the soil solution and leaching of plant nutrients; the availability and uptake of plant nutrients; the content of heavy metals in soils, plants, and water; and acidification of soils and water.

As a teacher, Professor Wiklander was esteemed and respected. He had an outstanding ability to communicate ideas, theories, and research results.

Lambert Wiklander's expertise was widely recognized. He was a visiting professor in Egypt and the United States, and many soil scientists from other countries visited him in Uppsala. His contributions to paper sessions and discussions at many international congresses were highly regarded. As a Consulting Editor for Soil Science over a long period of time, he rendered valuable service to his profession.

At the time of his death, Prof. Wiklander served as chairman of the Nordic Society for Clay Research. Because of his thorough knowledge of his field, effectiveness as a speaker, and involvement in agricultural and environmental issues, he was often invited to present papers at meetings. With the decease of Prof. Wiklander, the organizations of which he was a member have lost an active, enthusiastic, and unusually gifted member. Those who came in close contact with him have lost a sincere friend.

Erik G. Lotse, Uppsala, Sweden

**NEWS FROM THE NATIONAL SOCIETIES
NOUVELLES DES ASSOCIATIONS NATIONALES
BERICHTE DER NATIONALEN GESELLSCHAFTEN**

VII^o Congreso Latinoamericano de la Ciencia del Suelo

En San José, Costa Rica, se efectuó entre los días 30 de junio y 4 de julio de 1980 el 7^o Congreso de la Sociedad Latinoamericana de la Ciencia del Suelo, el cual fue presidido por el Ing. Alfredo Alvarado. Este evento interamericano se realizó en forma paralela al 4^o Congreso Agronómico Nacional en el Hotel Cariari. La reunión se inició con las palabras de bienvenida del Presidente del Colegio de Ingenieros Agrónomos de Costa Rica Ing. A. Rojas y del Sr. Ministro de Agricultura Prof. Hernán Fonseca. El Dr. W. G. Sombroek, Secretario General de la Sociedad Internacional de la Ciencia del Suelo también pronunció palabras de bienvenida a nombre de esta agrupación que el representa.

En el transcurso del Congreso se presentaron más de 70 trabajos por autores de 14 países; once de los cuales de Latinoamérica y los restantes de otras partes del mundo.

Además de numerosos trabajos sobre problemas ampliamente estudiados como la acidez, el contenido de elementos mayores en el suelo y su estimación, se presentaron varios estudios referentes al problema de la contaminación del ambiente por el uso inadecuado de abonos, plaguicidas y herbicidas, hecho que refleja la preocupación al respecto de los científicos de la ciencia del suelo en Latinoamérica. Se enfatizó también en lo que se refiere a la problemática del manejo de suelos con enfoques tradicionales y también modernos tales como el empleo del sistema de 'labranza mínima'. El día 3 de julio se realizaron giras a diferentes regiones de Costa Rica y el día siguiente se dedicó a sesiones plenarias y una mesa redonda sobre manejo y conservación de suelos derivados de cenizas volcánicas. Se puede calificar a las 7 sesiones plenarias efectuadas, como los eventos sobresalientes de la reunión, ya que estuvieron a cargo de especialistas destacados de mucha experiencia y en ellas se resumió toda la información disponible sobre los tópicos correspondientes.

Elemer Bornemisza, Costa Rica



The non-Costarican participants of the 7th Latin American Congress of Soil Science, during an evening reception at the Headquarters of the Instituto Interamericano de Ciencias Agrícolas (IICA) at San José

VIIIth Latin American Congress of Soil Science

The 7th Congress of Latin American Society of Soil Science, presided by Ing. Alfredo Alvarado, took place from June 30 until July 4, 1980, in San José, Costa Rica. This inter-American meeting happened in parallel with the 4th National Agronomic Congress. The meeting was opened with welcoming words by Ing. A. Rojas, President of Agronomic Engineers College of Costa Rica, and by Prof. Hernán Fonseca, Minister of Agriculture. The Secretary-General of the International Society of Soil Science, on behalf of that Society, also welcomed the participants.

During the Congress authors from 14 countries, being 11 from Latin America and the rest from other parts of the world, presented more than 70 papers.

Besides the numerous papers about well-studied problems such as soil acidity, the content of main elements in soils and their estimation, also several studies were presented regarding the problem of environmental contamination caused by inadequate use of fertilizers, pesticides, and herbicides, reflecting an awareness of these aspects by Latin American soil scientists. The problems of soil management with traditional and modern systems, such as utilization of the 'minimum tillage' system, were emphasized as well.

On 3rd July, tours were made to different soil sites of Costa Rica. The following day was dedicated for plenary sessions and round-table discussions on the management and conservation of soils derived from volcanic ashes. The 7 plenary sessions were led by well experienced specialists and therefore can be considered as outstanding meetings, where all available information on the respective topics was summarized.

Information: Dr. Elemer Bornemisza S., Universidad de Costa Rica, Ciudad Universitaria 'Rodrigo Facio', Costa Rica.

Sociedade Brasileira de Ciência do Solo

The eighteenth general Brazilian Soil Science Congress will take place in Salvador, Bahia from 30th August to 5th September 1981. The program of the Congress includes plenary meetings, round-table discussions, sessions of the various Commissions, poster sessions, and touristic and technical excursions, both pre- and post-Congress. The technical excursions will be to both humid and semi-arid parts of Bahia State and include visits to experimental stations and development projects.

In 1982 there will be moreover national meetings on Soil Fertility and on Soil Conservation Research, both in Campinas, S.P. (for the addresses of the organizing committees of these three meetings see this Bulletin's section on 'Meetings, Conferences, Symposia').

The Brazilian Society has its own scientific journal, entitled 'Revista Brasileira de Ciência do Solo', which is now in its sixth year of publication. There is also a printed 'Boletim Informativo' for all members of the Society, containing details of the various meetings taking place, and information on technical manuals, like 'Glossário de Termos da Ciência do Solo', 'Manual Brasileiro para Levantamento da Capacidade de uso da Terra (3ª aproximação)', 'Manual de Método de Trabalho de Campo', etc.

Address of the Secretariat: Otávio Antônio de Camargo, Secretário da S.B.C.S., Caixa Postal 28, 13100 Campinas, S.P., Brasil.

The National Service for Soil Survey and Conservation (SNLCS) published a 'Manual de Métodos de Análise de Solo' and is circulating for comments the first approximation of a new 'Sistema Brasileiro de Classificação de Solos'.

Information: Dr. Abeilard Fernando de Castro, Chief, SNLCS-EMBRAPA, Rua Jardim Botânico 1024-ZC-20, C.E.P. 20.000 Rio de Janeiro, Brasil.

Bodenkundliche Gesellschaft der DDR

Die Jahrestagung der Gesellschaft fand statt vom 7. bis 9. Mai 1980 in Neubrandenburg. Das Thema war 'Fragen der Erhöhung der Bodenfruchtbarkeit in den Nordbezirken der DDR'.

Im Mittelpunkt standen Fragen und neue Ergebnisse zur besseren Nutzung des Bodens und der planmäßigen Erhöhung der Bodenfruchtbarkeit im Norden der Deutschen Demokratischen Republik. In 54 Vorträgen wurden Ergebnisse und Erfahrungen zu Standortkartierung, Melioration, Bodembearbeitung und Fruchtfolgegestaltung sowie zu Nährstoffversorgung und Reproduktion der organischen Substanz mitgeteilt. Als entscheidende Bestandteile einer hohen Bodenfruchtbarkeit wurden herausgestellt die Anbaustruktur mit darauf aufbauend stabilen Fruchtfolgen, rationelle Verfahren der Bodembearbeitung, die Sicherung positiver Humusbilanzen, der ertragswirksame Einsatz der Mineraldünger und die bedarfsgerechte Durchführung von Meliorationen, die zur Sicherung einer hohen Effektivität in standort- und nutzungsspezifischen Kombinationen anzuwenden sind.

Anschrift: Dr. W. Barufke, Sekretär, Bodenkundliche Gesellschaft der DDR, Krausenstrasse 38-39, 108 Berlin, DDR.

Nederlandse Bodemkundige Vereniging

During the Annual Business Meeting of the Soil Science Society of the Netherlands on April 16th 1980, the following persons were elected or re-elected in the Board of the Society, for the period 1980-1981:

Chairman: Prof. Dr. P. D. Jungerius

Vice-chairman: Dr. Ir. J. Bouma

Secretary-Treasurer: Dr. R. G. Gerritse

Members:

Dr. J. A. Bakker

Ir. J. Th. J. Beeren

Ir. F. R. Boone

Ir. J. van den Burg

Dr. Ir. J. C. Dijkerman

Dr. Ir. A. W. S. van Egeraat

Drs. G. P. Gonggrijp

Dr. Ir. B. H. Janssen

Dr. Ir. P. Buurman

Mr. L. S. J. M. de Jonge

Ir. W. P. Locher

Dr. E. Oele

Ir. L. C. Struys

Ir. K. Rijniersce

Ir. P. W. Roest

Dr. Ir. J. P. N. L. Roorda v. Eysinga

Ir. W. F. Rosenbrand

Ir. A. J. A. M. Segers

Ir. P. J. Ton

Miss H. Horn (students' representative)

Ir. A. L. A. M. van Wijk

The Dutch Society has now about 570 members.

The 87th Scientific meeting of the Society took place in Wageningen on November 6th, 1980. The subject was 'Models as a tool for the description of transport processes in the soil.' Forthcoming scientific meetings will deal with the subjects 'Soil and Forest' (spring 1981) and 'Contamination of the Environment by Heavy Metals' (autumn 1981).

The Dutch Society will also be the host of the Symposium of Commission III of the International Peat Society on the subject 'Land use on the peatlands below sea-level in the western part of the Netherlands.' This will take place at the International Agricultural Centre (IAC) in Wageningen, from 24th to 28th August 1981.

Address of the Secretary (till 1985): Dr. R. G. Gerritse, Oosterweg 92, P.O. Box 30003, 9750 RA Haren, the Netherlands.

The Soil Science Society of East Africa

The fourth annual general meeting of the Society took place at the International Conference Centre of Arusha, Tanzania, on 27th and 28th October 1980. The theme of the meeting was 'Soils and Food Production', about twenty papers were presented, covering subjects like soil climate, soil survey, soil fertility, fertilizers, drainage and land evaluation. There were about 50 participants, mainly from Kenya and Tanzania.

At the Business Meeting of the Society the following office-bearers were elected:

Chairman:	Dr. F. J. Wangati, Nairobi, Kenya
Vice Chairman:	Mr. A. O. Moshi, Arusha, Tanzania
Secretary:	Mr. J. R. Okalebo, Nairobi, Kenya
Regional Treasurers:	
Kenya:	Mr. G. Hinga, NAL, Box 14733, Nairobi
Tanzania:	Dr. J. M. R. Semoke, Univ. of Dar-es-Salaam, Box 643, Morogoro
Uganda:	Dr. J. Y. Kitungulu-Zake, Makerere Univ., P.O. Box 7062, Kampala

Committee Members:

Mr. H. M. H. Braun	Dr. V. P. X. Da Costa
Mr. S. M. Kinyali	Mr. E. L. N. Ngatunga
Mr. A. J. Shayo-Ngowi	Dr. H. Ssali

Kenya will host the next General Meeting, in September or October 1981. The Society has started a Newsletter, the first issue of September 1980 dealing mainly with historical and organisational matters. There are now about 100 members of the Society.

Address of the Secretary: c/o ARD-KARI, Muguga, P.O. Box 30148, Nairobi, Kenya.

Immediately following the above mentioned event, the *fourth meeting of the FAO-supported Eastern and Central African Committee on Soil Correlation and Land Evaluation* took place, also in Arusha (29th October to 4th November 1980). This meeting was attended by country delegates from Tanzania, Kenya, Zambia, Sudan, Ethiopia and Botswana (Uganda, Lesotho, Malawi and Zimbabwe being absent), representatives of soil organisations of the U.K., Canada, USA, France and Holland and some 40 technical observers from Kenya, Tanzania and Zambia.

Each of the country delegates presented a paper on 'The Rating of Land Qualities and its Conversion into Land Suitability, with particular emphasis on Soil Moisture Storage and Climatic Conditions'. Also country-by-country talks were given on 'The State of Soil Survey and Problems Encountered'.

Though the approaches to soil survey and land evaluation in the six countries concerned vary widely, the presentations led to fruitful comments and suggestions on harmonization of methods. After the meeting, a number of soils in the Arusha-Tanga area were examined and discussed on their chemical data, their classification and their land use.

Information: Dr. Racim Sant-Anna, Regional Soil Resources Officer for Africa, FAO Regional Office, P.O. Box 1628, Accra, Ghana.

Persatuan Sains Tanah Malaysia

At the 9th Annual General Meeting of the Malaysian Society of Soil Science held on 12th May, 1980, the following members were elected as officials of the 1980/81 Management Committee:

President	: Mr. Sharifuddin b. Hj. Abdul Hamid	
Vice-Presidents		
Pen. Malaysia	: Dr. S. Paramanathan	
Sarawak	: Mr. Lim Chin Pang	
Sabah	: Mr. Kong Hon Hyen	
Hon. Secretary	: Dr. Mok Chak Kim	
Hon. Treasurer	: Mr. Tajuddin b. Ismail	
Immediate Past President	: Mr. Chew Poh Soon	
Asst. Hon. Secretary	: Dr. Jalaludin b. Jipelos	
Members	: Dr. E. Pushparajah	
	Mr. Law Wei Min	Dr. Othman Yaacob
	Mr. B. Gopinathan	Dr. Lau Chee Heng
	Mr. Chin Siew Lock	Mr. Ooi Cheng Hock
	Dr. Mohd. Zaki Ghazali	Mr. Nik Nasaruddin

There will be an *International Conference on Phosphorus and Potassium in the Tropics*. This PHOSPOTROPS Conference is organised by the Malaysian Society of Soil Science with the support of a number of agencies, connected with the phosphate and potassium industry. It will be held from Monday, 17th August to Wednesday, 19th August, 1981 in Kuala Lumpur, Malaysia.

The Conference is organised to provide an international forum for exchange of knowledge amongst scientists of various countries on all aspects of phosphorus and potassium in Tropical Agriculture. This would enable the collation of the considerable amount of information obtained in recent years.

A pre- and/or a post-Conference Tour will be organised to allow participants to see various aspects of Malaysian agriculture and some common tropical soils in Peninsular Malaysia.

In addition to voluntary contributions, it is intended to have several invited specialist papers.

The Conference welcomes original papers or comprehensive reviews on phosphorus and potassium in the tropics related to the following: Chemistry and Fertility; Nutrition and Physiology; Crop requirements; Phosphate and Potassium fertilisers; Efficient use; Economics.

Intending authors must send in their full texts with illustrations to reach the Chairman before 30th March, 1981.

The Proceedings of the Conference will be published by the Malaysian Society of Soil Science.

In order to encourage maximum participation, the registration fee will be only M\$ 100. All payments are to be made out in the name of the Malaysian Society of Soil Science.

Information and registration: The Chairman, PHOSPOTROPS, Malaysian Society of Soil Science, P.O. Box 2644, Kuala Lumpur, Malaysia.

Australian Society of Soil Science

A new committee has been elected to run the Australian Society of Soil Science Incorporated for the period 1980–1982:

President: Dr. K. G. Tiller
Vice-President: Dr. J. S. Russell
Secretary: Dr. A. M. Alston
Treasurer: Dr. R. M. McKenzie
Editor, Soils News: Mr. K. A. Handreck

Dr. R. Brewer has been awarded the J. A. Prescott Medal of Soil Science for 1980, for his outstanding contributions in the field of soil micro-morphology. The Australian Society of Soil Science Incorporated Publication Medal, which is presented annually to a scientist under 35 years of age on the basis of published work, was awarded in 1979 to Dr. P. S. Sidhu, and in 1980 to Dr. M. J. Knight.

The first National Soils Conference organised by the Australian Society of Soil Science Incorporated was held in Sydney from 19–23 May 1980. Highlights of the Conference were review papers which examined past achievement, set the current scene and pointed the way for future efforts. The wide range of topics covered reflected the broad growth of soil science and its interaction with other disciplines. Concern with education, economics, research and publication emphasised the practical bases for the understanding, utilization and conservation of one of the nation's main resources.

Address of the Secretary: Department of Soil Science, Waite Agricultural Research Institute, Glen Osmond, South Australia 5064, Australia.

Dr. Roy Brewer honoured



Dr. Roy Brewer, a Chief Research Scientist with the CSIRO Division of Soils, Canberra, retired on the 3rd of October 1979 after 38 years of service as pedologist and micropedologist. He graduated from the University of Sydney in 1941, and in April of the same year joined the Division of Soils in Adelaide, and carried out soil survey with Bob Smith in the Moulamein district. Following a break during the war years when he served with the RAAF he returned to the Division to carry out soil surveys in the Riverina (with Bruce Butler), Hunter Valley, New England, Sydney and Canberra areas. He moved to Canberra in 1949 and from 1950 on devoted most of his time to micropedology; to improve the techniques and to apply them to provide a better understanding of soil genesis and behaviour. He has published the monograph 'Fabric and Mineral Analysis of

Soils', is a co-author of 'A Handbook of Australian Soils', a contributor to 'The Encyclopedia of Soil Science', 'Glossary of Soil Micromorphology', 'Soils – An Australian Viewpoint', and has published more than 50 scientific papers. His monograph 'Fabric and Mineral Analysis of Soils' played a significant role in the recent increased use of micromorphology not only in pedology and applied soil science but also in Pleistocene geology, soil zoology etc. and elevated him to top status among the micromorphologists of the world. This monograph has been quoted more than 270 times since it was published in 1964 and has become a Citation Classic.

He was awarded his D.Sc. by the University of Sydney in 1963, a Leverhulme Trust Fellowship 1964–65, and a Commonwealth Research Fellowship 1971–72, and is listed in Who's Who in Australia, 1977.

He was Senior Vice-President of Commission VII of ISSS 1960–64, Secretary of Commission V of the IXth International Congress of Soil Science, Adelaide 1964–68, President of the A.C.T. Branch of ASSS 1959–60, Convenor of the Sub-Committee for Soil-stratigraphic Nomenclature 1967–70, member of the Editorial Board Geoderma 1967–79, and a member of the Working-Group on Soil Micromorphology of ISSS 1969–73.

He has been appointed an Honorary Research Fellow with the Canberra Laboratories and has just been awarded the J. A. Prescott Medal of Soil Science by the Australian Society of Soil Science. Dr. Brewer hopes to complete two monographs in the near future, but the latter now have a low priority behind travelling, painting, gardening and golf.

J. R. Sleeman, Canberra, Australia.

Nippon Dojohiryo Gakkai

The Society of the Science of Soil and Manure, Japan, held the Annual Meeting of 1980 at the Tottori University from April 1–3, 1980. There were 323 papers presented in the Sections of eleven different fields and four Symposia were held during the Meeting.

At the Meeting of the Society elected new members to the Board for 1980–1981:

President: Prof. Dr. Akira Tanaka, Hokkaido University

Vice-Presidents: Prof. Dr. Kijuo Kumazawa, Tokyo University
Mr. Chiaki Asano, Society of Fertilizer Inspection

Secretary: Mr. Toshio Kaneko

Members:

Dr. T. Kiuchi	Dr. M. Mitsuchi
Dr. N. Shimada	Dr. H. Shiba
Dr. H. Wada	Dr. K. Ishizuka
Dr. R. Hamada	Dr. J. Yazaki
Dr. H. Takato	Dr. T. Matsuzaki
Dr. S. Terazawa	Dr. T. Yoshida (international relations)
Dr. H. Takenaga	

Address: The Society of the Science of Soil & Manure, Japan, 26-10-202, Hongo 6-chome, Bunkyo-ku, Tokyo, 113 Japan.

Sociedad Colombiana de la Ciencia del Suelo

The Colombian Society celebrated its 25th Anniversary on 5th September 1980. On this occasion, a panel discussion was held in Bogotá on the theme 'Soil Science and Agricultural Development of Colombia'.

In Medellín, where the foundation of the Society actually took place, an international seminar was held, from 15th to 17th October, on the subject 'Land Capability Classification in the Latin American Tropics'.

Address of the Secretary: Sociedad Colombiana de la Ciencia del Suelo, Carrera 11 no. 66–34, Apartado Aereo 51791, Bogotá, D.E., Colombia.



Hommage à Mr. Georges AUBERT

La réunion annuelle des pédologues de l'ORSTOM du 11 septembre 1980 a été consacrée à un hommage à l'oeuvre de G. Aubert. Cet hommage qui a comporté une réflexion sur la démarche scientifique qu'il a suscitée dès son arrivée à l'ORSTOM en 1944, mais a été aussi consacré à une mise au point de l'état des recherches pédologiques dans le milieu intertropical, et à leurs perspectives d'avenir.

Le programme du matin comprenait les exposés suivants :

- Présentation de la Journée par le Professeur N. Le-neuf, Président du Comité Technique de Pédologie, de l'ORSTOM.
- Concepts, approche pédologique globale et classification dans 'l'Ecole ORSTOM', par J. Boulaine, Professeur à l'I.N.A.-Grignon.
- Apports de la pédologie ORSTOM dans la Géochimie de surface, par le Doyen G. Millot, Professeur à l'Université de Strasbourg, membre de l'Académie des Sciences.
- G. Aubert et son rôle international, par R. Tavernier, Professeur à l'Université de Gand, membre de l'Académie des Sciences de Belgique.
- Pédologie et Agronomie: du concept de vocation à celui d'aptitude, par le Professeur S. Henin, Directeur de Recherches honoraire à l'I.N.R.A. et membre de l'Académie d'Agriculture.

Les exposés de l'après midi ont été axés sur deux thèmes de recherche: *sols salés* et *sols des régions arides*. Plusieurs conférenciers y ont pris la parole e.a.: C. Cheverry, M. Rieu, M. Pouget, R. Pontanier et R. Fauck.

Cette séance a été animée par G. Aubert qui a fait part de ses conceptions sur le développement économique de ces régions et a présenté ses conclusions pour cette journée ORSTOM.

Un numéro spécial des 'Cahiers de Pédologie' sera consacré à la publication des exposés de cette journée. En complément le Comité Technique a émis le voeu d'y voir figurer des articles sur des travaux récents dans des domaines qui n'auront pas été abordés au cours de cette journée, mais qui ont été très marqués par l'influence de G. Aubert.

R. Tavernier, Gand, Belgique

Hungarian Society of Soil Science

The 10th General Technical Meeting ('Talajtani Vándorgyűlés') of the Society took place in the District of Kaposvár, on the 12th and 13th September 1980. About 400 Hungarian soil scientists and agronomists from State Farms took part. Representatives of the national soil science societies of DDR, Czechoslovakia, Switzerland and Spain, and the Secretary-General ISSS, also attended, as guests of the Hungarian Society of Agricultural Sciences.

The theme of the meeting was 'Recent Problems of Soil Amelioration in Hungary' and a total of 27 papers were presented during the first day, at the premises of the College of Agriculture/Animal Husbandry of Kaposvár town (Director-General Dr. Guba). Some of the topics of the plenary session were 'the role of soil amelioration in conservation and increasing of soil fertility' (Prof. I. Szabolcs), 'environmental aspects of soil amelioration' (Prof. P. Stefanovits) and 'economical problems of soil amelioration' (Dr. G. Kunicz). Thereafter the participants split up in two sections to deal with a number of specialistic topics. Also a Board meeting of the Society took place. A very enjoyable evening of dinner and dance was followed by a field day in the Kaposvár District. A typical soil with drainage problems (gleyic Luvisol, fragipan phase) of the coversand region was inspected under the guidance of Prof. Stefanovits, and a number of ameliorative measures were shown in execution.

Address of the Secretariat: C/- Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences, Herman O. út 15, H-1022 Budapest II, Hungary.



Part of the group of participants at the Hungarian Technical Meeting, viewing the machine placing of drain tubing, aided by a laser-outfit for ensuring a constant slope of the drains

Under the aegis of the Hungarian Society the following two meetings will be organized:

The *7th Scientific Meeting of Soil Biology*, organized by the Section of Soil Biology of the Hungarian Society of Soil Science, from 26 to 28 August, 1981, at the Agricultural University, Gödöllő.

The topics are:

- The effect of mineral fertilization on soil biological processes.
 - Interaction between pesticides and soil organisms.
 - The role of soil organisms in the decomposition of plant residues.
 - The role of soil organisms in humus synthesis and decomposition.
 - Soil organisms as components of the soil ecosystem.
 - The role of soil organisms in the recultivation of the technogenic landscape.
- The participation fee is 1000 Ft or about 50 US dollars.

The *2nd Scientific Meeting of the Recultivation of Technogenous Landscapes*, from 15 to 17 June 1982 at Gyöngyös.

The topics are:

- The problems of recultivation of technogenous landscapes.
- Connection between the open mine exploitation and the formation of waste tips.
- The physical, chemical and biological problems of the formation of anthropogenic soils.
- The development of biocoenoses during the recultivation of technogenous landscapes.
- Problems of soil protection on technogenous landscapes.
- The meliorization, cultivation and fertilization of soils on technogenous landscapes.
- The rotation of crops on technogenous landscapes.
- The utilization of the secondary products of mining and power plants.

The official languages are Russian and English.

Information: Potential participants for both meetings should contact the Secretary of Organizing Committee. The address is: Dr. Éva Bakondi-Zámory, Secretary, Centre of Plant Protection and Agrochemistry, P.O. Box 127, 1502 Budapest, Hungary.

Société Belge de Pédologie – Belgische Bodemkundige Vereniging

La Société Belge de Pédologie – Belgische Bodemkundige Vereniging – a élu les membres suivants au Conseil pour l'année 1981:

Président:	R. Frankart
Vice-présidents:	F. Delecour
	F. De Coninck
Secrétaire-général:	W. Verheyne
Secrétaire-trésorier:	A. Louis
Membres:	L. Baert, A. Bollinne, J. Feyen, R. Gombeer, G. Hofman, J. Lozet, L. Mathieu, G. Stoops.

Deux journées à thème, ayant successivement comme titre 'Aptitude agricole des terres et problèmes associés' et 'Avis de fumure sur base d'analyses de profil', auront lieu respectivement à Louvain-la-Neuve le 25 mars 1981 sous la direction de R. Frankart et à Gand le 2 octobre 1981 sous la direction de L. Bart et M. van Ruymbeke.

Adresse: Krijgslaan 271, 9000 Gent, Belgique.

INTERNATIONAL RELATIONS RELATIONS INTERNATIONALES INTERNATIONALE VERBINDUNGEN

International Soil Tillage Research Organisation (ISTRO)

Conference

The 8th Conference of ISTRO, from 10–14 September 1979 in Stuttgart-Hohenheim-BRD, was successfully organized by its President, Prof. Dr. G. Kahnt and his co-workers. It was attended by 112 research workers in soil tillage and related fields, coming from 26 countries.

The papers (65) dealt with a variety of topics, ranging from the effect of tillage-induced soil properties on root development and crop growth, to the development of tillage systems (including minimum tillage and direct drilling) under different conditions; workability; controlled traffic; and engineering aspects of soil tillage. Several people demonstrated details of their research findings during a poster session.

A visit to the 'German Agricultural Museum' with a unique collection of historical tillage implements and a demonstration with modern tillage machinery proved to be equally worthwhile. During a full-day excursion big contrasts were shown: a modern, fully mechanized arable farm on heavy soil in a dry climate, and a 'biological' farm on a medium light soil in a humid climate. A postconference excursion to the 'Thingerhof' Experimental Husbandry Farm made it very clear that soil tillage is an integral part of the farming system.

The offset-printed A-4 size Conference Proceedings (439 pages in two volumes) may be ordered from the secretary-general by sending a remittance of Dfl. 45.00. Also the Proceedings of the 7th Conference 1976, Uppsala, are still in stock: Dfl. 25.00.

Board

In Stuttgart-Hohenheim the Board of ISTRO was reconstituted as follows:

- Prof. Dr. V. Mihalić, Yugoslavia, president
- Mr. I. Žugec, Yugoslavia, executive secretary of the 9th Conference
- Prof. Dr. H. C. Aslyng, Denmark, president-elect
- Prof. Dr. G. Kahnt, Fed. Rep. of Germany, past-president
- Dr. B. D. Soane, United Kingdom, member
- Ir. C. van Ouwerkerk, secretary-general.

Membership

In Stuttgart-Hohenheim it was decided to charge a membership fee of Dfl. 15.00 per annum for individual members and of Dfl. 75.00 per annum for corporate members as from 1980. These amounts or the equivalent in foreign currency may be remitted to the account of the International Soil Tillage Research Organization (ISTRO), No. 57 02 99 926, Algemene Bank Nederland, branch-office Haren GN, the Netherlands.

Information bulletin

During the closing session of the 8th Conference of ISTRO several important decisions were taken. A basic decision was that ISTRO will scientifically support the new 'Soil & Tillage Research' Journal. As a consequence it was decided to terminate the biannual information bulletin 'ISTRO-INFO', published since 1977. However, it was agreed with Elsevier to incorporate the essentials of its contents in 'Soil & Tillage Research' under the same heading 'ISTRO-INFO' and to send free reprints of this section to all members.

Address: Secretary-general ISTRO, c/o Institute for Soil Fertility, P.O. Box 30003, 9750 RA Haren, the Netherlands.

INTERNATIONAL TRAINING COURSES/COURS INTERNATIONALES DE FORMATION/INTERNATIONALE FORTBILDUNGSKURSE

International Course for Development Oriented Research in Agriculture ICRA

General background

There has been a growing awareness that national agricultural research systems must play a pivotal role in the improvement of agricultural production, thus contributing to the well-being of both rural and urban masses in low-income countries.

Strengthening of national research systems in low-income countries apparently is a very complex task. This has also been recognized by a group of European Representatives to the Consultative Group on International Agricultural Research (CGIAR). They identified as one of the major bottlenecks the availability of well-trained scientists with understanding and appreciation of the problems of rural development.

Objectives

The main objective of the course is to help prepare young agricultural scientists, both from developing and developed countries, to function more fully in applied research in low-income situations. It has so often been observed that such graduates-typically with a biological/technical, usually mono-disciplinary oriented background- are not sufficiently prepared during their University training for the complex situation they are going to work in. The course is thus intended to make these scientists familiar with socio-economic aspects of the farming systems in national agricultural research.

Course location and financial support

After considerable discussion and consultation the International Agricultural Centre (IAC) in Wageningen, the Netherlands, was asked to act as host institute.

This decision was taken in a meeting of European donor members of CGIAR in Switzerland in March 1980, where a group of seven European countries expressed willingness to support this course. These countries are: Belgium, the Federal Republic of Germany, France, Italy, the Netherlands, Switzerland and the United Kingdom.

The Ministry of Agriculture and Fisheries of the Netherlands has made available a Director of Studies and other organizing staff. Budget contributions will be made by member countries in cash and/or kind.

Course set-up and content

An average of 25 participants per course can be admitted. It will be a 9 month course divided in three blocks. Central to the course is the middle block of 3 months' field work, carried out in developing countries. Broad aspects of agricultural production and development are then studied. Topics will be: farming system analysis, the socio-economic aspects of technological innovations, the role of infrastructure and rural institutions, the phenomenon of risk and uncertainty at farm level, the relationship between agricultural research, rural employment and income etc.

These field studies will be carried out by groups of 4-5 course participants under the guidance of an experienced tutor. The field period will be preceded by 3 months of training at the Course Centre (Wageningen) in preparation of the field surveys. Attention will be given to aspects of (sub-)tropical farming, population and food supplies, methods and techniques of data collection, analysis of rural institutions and planning.

After the field survey period the participants will spend 3 months to report on the collected and analysed information, discuss case studies of the various groups, and receive lectures on research planning and management.

The course will terminate with an assessment of how a multi-disciplinary approach will help in the identification of problems and in setting more relevant objectives for research. This could for example be highlighted through the **methodology of land evaluation**. Particular attention has to be paid to the feedback of farmers' priorities and constraints.

Qualifications of participants

Candidates should be normally under 30 years of age, have a M.Sc. degree or equivalent in agricultural or biological sciences, with preferably some experience. A reasonable knowledge of English is required and the prospective participants must intend to work for an extended period in developing countries as an agricultural scientist.

Candidates can be proposed by sponsoring authorities or could apply individually to Director of Studies, ICRA. Fellowships will be offered by member countries.

Time schedule of the course

The first full-fledged course is scheduled for 1982, starting early January. In 1981 a short course of an experimental nature will take place, starting end of March 1981, specifically to explore course contents and test the methodology and techniques of field surveys.

Teaching staff

In order to make ICRA a truly international undertaking, temporary teaching staff will be drawn from the best institutions that Europe and low-income countries have to offer. Lecturers will normally be visiting ICRA during a period ranging from one day to two weeks. Tutors will be employed for a period of six months per year; they are mainly responsible for the field study part of the course.

Certificate

Candidates who successfully complete the course will be awarded a certificate. This ought to be recognized by international centres and national governments. Member countries may consider the possibilities for the course being accepted in partial fulfilment of the requirements for a Ph.D. degree at their own universities.

Further information:

Prof. Dr. H. A. Luning, Director of Studies, I.C.R.A., P.O. Box 88, 6700 AB Wageningen, The Netherlands.

**MEETINGS, CONFERENCES, SYMPOSIA
REUNIONS, CONFERENCES, SYMPOSIUMS
TAGUNGEN, KONFERENZEN, SYMPOSIEN**

Meetings etc., marked with*, are organized or sponsored by the ISSS/*Réunions etc., indiquées avec**, *sont organisées ou favorisées par l'AISS*/Tagungen usw., angezeigt mit*, werden organisiert oder unterstützt von der IBG.

1981

***International Conference on Aridic Soils: Properties, Genesis and Management**, Jerusalem, Israel, 29 March – 4 April (ISSS Commissions V and VI and Working Group DS).

Information: Dr. D. H. Yaalon, Department of Geology, The Hebrew University of Jerusalem, Jerusalem 91000, Israel or Secretariat, P.O. Box 3054, 122 Hayarkon Street, Tel Aviv, Israel.

Session on International Groundwater Development, New York City, U.S.A. 6–10 April 1981.

Information: A. I. Johnson, Woodward-Clyde Consultants, 2909 West 7th Avenue, Denver, Colorado 80204, U.S.A.

Perspectives in Landscape Ecology, Eindhoven, The Netherlands, 6–11 April 1981.

Information: Ms. W. J. M. van Giersbergen, Congress Bureau of the Information Dept. TNO, Juliana van Stolberglaan 148, 2595 CL The Hague, The Netherlands.

Symposium on Multidisciplinary Studies on Hudson/James Bay, Guelph, Ontario, Canada, 28–30 April 1981.

Information: Prof. I. P. Martini, Department of Land Resource Science, Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada N1G 2W1.

First International Symposium on Crustal Movements in Africa, Addis Ababa, Ethiopia, 5–16 May 1981.

Information: Mr. A. M. Wassef, c/o ECA, P.O. Box 3001, Addis Ababa, Ethiopia.

Golden Jubilee Int. Symposium on Copper in Soils and Plants, 7–9 May 1981, Perth, Australia.

Information: J. F. Loneragan, Murdoch University, Perth, W.A. 6153, Australia.

15th International Symposium on Remote Sensing of Environment, Ann Arbor, U.S.A., 11–15 May 1981.

Information: Remote Sensing Center, Environmental Research Institute of Michigan, P.O. Box 8618, Ann Arbor, Michigan 48107, U.S.A.

Symposium on Strategies of Plant Reproduction, Beltsville, U.S.A., 17–20 May 1981.

Information: Dr. A. Piringer, BARC Symposium VI, USDA, Room 130, Building 003, BARC-W, Beltsville MD 20705, U.S.A.

Fifth International Symposium on Environmental Biogeochemistry, Stockholm, Sweden, 1–5 June 1981.

Information: R. O. Hallberg, Department of Geology, University of Stockholm, Box 6801, S-11386 Stockholm, Sweden.

- *Symposium on Soil Mapping and Remote Sensing**, Warsaw, Poland, 1–6 June 1981.
Information: Dr. M. S. Bialousz, UL, Belska, 24 M 24, 02638 Warsaw, Poland.
- Symposium on Machine Processing of Remotely Sensed Data**, West Lafayette, U.S.A., 23–26 June 1981.
Information: D. B. Morrison, Purdue University/LARS, 1220 Potter Drive, West Lafayette, Indiana 47906, U.S.A.
- *Colloque International 'Humus et Azote'**, Reims, France, 7–11 Juillet 1981.
Information: Dr. Dutil, INRA, Station de Sciences du Sol, route de Montmirail, 5100 Chalons sur Marne, France.
- 5th Research Conference of the International Turfgrass Society**, Guelph, Canada 20–22 July 1981.
Information: Prof. Dr. C. M. Switzer, President, Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada N1G 2W1.
- International Symposium on Iron Nutrition Problems in Plants**, Provo, U.S.A., 12–14 August 1981.
Information: A. Wallace, 387 WIDB, Brigham Young University, Provo Utah 84602, U.S.A.
- 12th Congress and General Assembly of the International Union of Crystallography**, Ottawa, Canada, 16–25 August 1981.
Information: Mr. K. Charbonneau, Executive Secretary 12th I.U.Cr. Congress, National Research Council of Canada, Ottawa, Ontario, Canada K1A 0R6.
- International Conference on Phosphorus and Potassium in the Tropics**, 17–19 August 1981, Kuala Lumpur, Malaysia.
Information: Chairman, Conference Phosphotrops, Malaysian Society of Soil Science, P.O. Box 2644, Kuala Lumpur, Malaysia.
- *International Working Meeting on Soil Micromorphology**, London, U.K., 17–21 August 1981 (ISSS Subcommission B).
Information: Dr. P. Bullock, Rothamsted St., Harpenden, Herts. AL5 27Q, U.K.
- 5th International Conference on Soil Science**, 19–23 August 1981, Prague.
Information: Dr. Ing. Z. Facek CSc., Chairman, Organizing Committee, Res. Inst. for Crop Production, Division of Soils, 161 06 Prague 6 – Ruzyně, Czechoslovakia.
- Symposium on land use of peatlands lying below mean sea-level in the western part of the Netherlands**, Wageningen, the Netherlands, 24–28 August 1981.
Information: Ir. M. W. van den Berg, State Geological Survey, P.O. Box 58, 7240 AB Lochem, the Netherlands.
- 8th Scientific Meeting of Soil Biology**, Gödöllő, Hungary, 26–28 August 1981.
Information: Dr. E. Bakondi-Zámory, Secretary, Centre of Plant Protection and Agrochemistry, P.O. Box 127, 1502 Budapest, Hungary.
- 18th Congress of the Brazilian Society of Soil Science**, Salvador, Brazil, 30 August – 5 September 1981.
Information: L. P. Ribeiro, Instituto de Geociência da UFBa, C.P. 4097, 40000 Salvador, BA, Brazil.

11th International Congress on Irrigation and Drainage, Grenoble, France, August/September 1981.

Information: ICID, 48 Nyaya Marg, Chanakyapuri, New Delhi-110021, India.

2nd International Seminar on Laterization Processes, São Paulo, Brazil, 3–13 September 1981.

Information: Prof. A. Carvalho, 2nd International Seminar on Laterization Processes, Instituto de Geociências – USP, C.P. 20.899, São Paulo, SP, Brazil.

7th International Clay Conference, Bologna/Pavia, Italy, 6–12 September 1981.

Information: Prof. F. Veniale, Chairman Organizing Committee 7th International Clay Conference, c/o Instituto Mineralogia Petrografia, Università, Via Bassi 4, 27100 Pavia, Italy.

***International Symposium on Soil Problems in Urban Areas, West-Berlin, G.F.R., 7–9 September 1981.**

Information: Prof. Dr. E. Schlichting, PF 106 (05100), D-7000 Stuttgart 70, B.R.D.

***Meeting on Handling of Soil Data, Paris, France, 14–17 September, 1981.**

Information: Mr. M.-C. Girard, Laboratoire de Pédologie, INA P/G, 78850 Thiverval-Grignon, France.

***International Colloquium on Earthworm Ecology, Merlewood, U.K., September 1981.**

Information: Dr. J. E. Satchell, Institute of Terrestrial Ecology, Merlewood Research Station, Grange-over-Sands, Cumbria LA11 6JU, U.K.

Conference on Remote Sensing of Arid and Semi-arid Lands, Cairo, Egypt, 4–10 November 1981.

Information: Remote Sensing Center, Environmental Research Institute of Michigan, P.O. Box 8618, Ann Arbor, Michigan 48107, U.S.A.

1982

***12th International Congress of Soil Science: Managing Soil Resources to Meet Challenge of Mankind, New Delhi, India, 8–16 February 1982.**

Information: Dr. T. D. Biswas, Organizing Secretary 12th International Congress of Soil Science, Division of Soil Science & Agricultural Chemistry, Indian Agricultural Research Institute, New Delhi-110012, India.

2nd Scientific Meeting of the Recultivation of Technogenous Landscapes, Gyöngyös, Hungary, 15–17 June 1982.

Information: Dr. E. Bakondi-Zámory, Secretary, Centre of Plant Protection and Agrochemistry, P.O. Box 127, 1502, Budapest, Hungary.

Symposium on Hydraulic Applications of Remote Sensing and Remote Data Transmission, Exeter, U.K., 19–30 July 1982.

Information: A. I. Johnson, Woodward-Clyde Consultants, 2909 West 7th Avenue, Denver, Colorado 80204, U.S.A.

11th INQUA Congress, Moscow, USSR, August 1982.

9th International Colloquium of Plant Nutrition, Warwick, UK., 22–28 August 1982.

Information: Dr. M. A. Scaife, NVRS, Wellesbourne, Warwick CV35 9EF, U.K.

12th Congress of the International Association of Sedimentologists, Hamilton, Ontario, Canada, September 1982.

4th International Congress of the International Association of Engineering Geology, New Delhi, India, 1–6 December 1982.

Information: Mr. Srivastava K.N., 47–48, Pragati House, Nehru Place, New Delhi-110019, India.

15th Brazilian Meeting on Soil Fertility, Campinas, Brazil.

Information: B. van Raij, C.P. 28, 13100 Campinas, SP, Brazil.

Meeting on Soil Conservation Research, Campinas, Brazil.

Information: F. Lombardi Neto, C.P. 28, 13100 Campinas, SP, Brazil.

9th Conference of the International Soil Tillage Research Organization (ISTRO), Osijek, Yugoslavia.

Information: Prof. V. Mihalić, University of Zagreb, Faculty of Agriculture, Šimunska cesta 25, 41000 Zagreb, Yugoslavia.

1983

Fourth International Conference on Permafrost, Fairbanks, Alaska, U.S.A., 18–22 July 1983.

Information: L. De Goes, Executive Secretary Polar Research Board, National Academy of Sciences, 2101 Constitution Ave., N.W., Washington D.C. 20418, U.S.A.

***Meeting on the Interaction of Roots and Micro-organisms and the Cycling of Nitrogen, England (ISSS Commissions III and VI).**

Information: British Society of Soil Science, University of Nottingham, School of Agriculture, Sutton Bonington, Loughborough, Leics LE12 5RD, U.K.

Centennial Commemoration of the Mount Krakatau Explosion, Indonesia.

Information: Committee on 100th Anniversary of Mt. Krakatau Explosion, Lipi, Jl. Tenku Chik Ditiro 43, Jakarta, Indonesia.

1984

12th International Congress on Irrigation and Drainage, Fort Collins, Denver, Colorado, U.S.A.

Information: Secr. ICID, 48 Nyaya Marg, Chanakyapuri, New Delhi-110012, India.

The 10th International Congress of Agricultural Engineering, Budapest, Hungary.

Information: Gy. Szalai, CIGR Congress Coordinator, Comité National Hongrois de la CIGR, Kossuth Lajos tér 6–8. IV. 425, H-1372 Budapest, V., Hungary.

NEW PUBLICATIONS* NOUVELLES PUBLICATIONS* NEUE VERÖFFENTLICHUNGEN*

La Pédologie. G. Aubert et J. Boulaine. Que Sais-Je? No. 352. Presses Universitaires de France, Paris, 1980.

Cette troisième édition de 'La Pédologie' a été entièrement refondue. En effet, d'autres ouvrages ont été publiés dans la même collection (l'Agrologie, Les Sols de France), et des remaniements nombreux ont pu être effectués puisque certains sujets étaient traités en détail ailleurs.

La typologie des sols notamment a pu être développée et ceci d'autant plus facilement que de nombreux travaux ont été publiés ces dernières années dans ce domaine. Tout en restant dans un cadre classique, les auteurs donnent l'essentiel des analyses récentes concernant l'héritage et les néosynthèses tant minérales qu'organiques, les études structurales fines ou à l'échelle des paysages, ainsi que le fonctionnement et le comportement des sols.

Prix: FF 10.

Commandes: Presses Universitaires de France, 90 Bd. St.-Germain, 75005 Paris, France.

Bacteria and Mineral Cycling. T. Fenchel and T. H. Blackburn. Academic Press, London and New York, 1979, 226 p. ISBN 0-12-252750-X.

This book describes the influences of bacterial metabolism on the chemical environment of the biosphere. The discussion of the energetics of bacterial processes serves as a general structure for most of the topics in the book since such considerations may afford insight into which processes are important in natural ecosystems. Within this basic framework, two major aspects of bacterial metabolism are stressed. Firstly, the chemical evolution of the biosphere and secondly, the manner in which different element cycles interconnect in natural ecosystems. Appendices are included with information that will help those with only elementary knowledge of microbiology, energetics and ecology.

Its readers will include general microbiologists who want to find out about the ecological significance of microorganisms; ecologists whose microbiological background is limited yet who wish to understand the role of bacteria in natural ecosystems; postgraduates in microbial ecology; and, finally, applied scientists – such as soil scientists or environmental engineers – involved with microbial ecosystems.

Price: £ 34.00.

Orders to: Academic Press, 24-28 Oval Road, London NW1, England; or 111 Fifth Avenue, New York, NY 10003, U.S.A.

The Explanatory Dictionary of the Soviet Soil Science. Translated from the Russian edition of 1975 by I. Kanno. Tatara-Shobo, Yonago, 1979, 351 p.

The dictionary has 1888 entries of Russian soil science terms. It has a preface of the late Isss honorary member A. A. Rode. English synonyms are given, after which a Japanese explanation is entered.

This publication has a Japanese and an English index which makes it also useful as an English-Russian-Japanese dictionary.

Price: 5800 Yen (approx. 25 US dollars).

Orders to: Tatara-Shobo, 77 Higashi-machi, Yonago-shi, 683 Japan.

Soils in Construction, Second edition. W. L. Schroeder. John Wiley & Sons, New York and Chichester, 1980. 315 p. ISBN 0-471-05648-0.

This book introduces students to the nature of soils and illustrates how soil materials may influence certain construction operations.

Part I is an introduction to soil materials. In conjunction with the testing methods in Part III, the material presented provides the basic background for understanding soil behaviour and how construction specifications relate to it. Part II deals with soils in the construction contract.

The book contains many figures and charts and example problems are included. Part I contains chapters on: physical character of soil constituents; natural soil deposits; soil index properties; soil classification; and stress analysis and engineering properties.

Price: £ 12.65.

Orders to: John Wiley & Sons, Distribution Centre, Shripney, Bognor Regis, West Sussex, England PO22 9SA; or 605 Third Avenue, New York, NY 10016, U.S.A.

*Titles of new publications are listed here for information. Orders can however not be handled by the ISSS Secretariat but should be placed through a bookscore or directly with the publishers.

*Les titres de nouvelles publications sont mentionnés à titre d'information. Le Secrétariat de l'AISS ne peut toutefois pas se charger de commandes, celles-ci devant être adressées à une librairie ou directement aux éditeurs.

*Die Titel neuer Veröffentlichungen sind hier zur Information angeführt. Bitte richten Sie Ihre Bestellungen nicht an das IBG Sekretariat sondern an den Buchhandel oder direkt an die Verlage.

Soils. Their formation, classification and distribution. E. A. FitzPatrick. Longman, London and New York, 1980, 353 p. ISBN 0-582-44188-9.

The author is well-known for his textbook *Pedology*, first published in 1971 and *An Introduction to Soil Science* of 1974. The present book is an entirely rewritten and updated new edition of *Pedology*. It begins with the fundamental properties of soils, followed by the factors and processes of soil formation and a discussion of soil properties observable in the field and laboratory, due attention being given to micromorphological features. Nearly half of the book is devoted to soil nomenclature and classification. The chapters contain information on the American, Australian, Canadian, French, Russian and South African classification systems, as well as on those developed by Avery, Leeper, Northcote and the author himself. The units of the FAO-Unesco Soil Map of the World are used to discuss the soil classes of the world. For all classes the approximate equivalents in the USDA and FitzPatrick systems are given, while the soils are correlated with names in some other classification systems.

Attention is given to the general characteristics, morphology, some chemical and physical properties, genesis, distribution and utilization of the soils. The final chapter provides an interesting summary of the relationships between soils and their parent material, climate, organisms, topography, time, horizons and soil properties. The book contains also data on 22 secondary soil minerals, definitions of soil horizons and references.

The publication is well-illustrated with diagrams, tables, photographs and some colour plates. No doubt, this book will find its way to many libraries and individuals.

Price: £ 25.00, bound, hardcover.

Orders to: Longman, Longman House, Burnt Mill, Harlow, Essex CM20 2JE, England.

The Role of Phosphorus in Agriculture. F. E. Khasawneh, E.C. Sample and E. J. Kamprath, editors. Published by ASA, CSSA, and SSSA, Madison, 1980, 928 p. ISBN 0-89118-062-1.

This book is a compilation of papers presented at a symposium held at Muscle Shoals, Alabama, 1-3 June 1978. The objectives of the symposium were to assemble recognized authorities to summarize current knowledge about phosphorus as it relates to agriculture and to provide an authoritative reference work on this subject.

The book covers phosphorus from the mine to the end use in fertilizers. Topics include: (I) surveys of world and U.S. phosphate ore deposits, and evaluation of these raw materials; (II) new developments in phosphoric acid and phosphate fertilizer technology and in processing low-grade deposits; (III) patterns in supply-demand trends of phosphate fertilizers; (IV) reactions of phosphate fertilizers in soils and methods of assessing the status of soil phosphorus, including residual and organic forms; (V) agronomic factors related to the effectiveness of various phosphate sources, both inorganic and organic; (VI) phosphate nutrition of major crops and the relationship between crop nutrition and nutrition of humans and animals; and (VII) the impact of fertilizer phosphorus on the environment.

Price: \$ 25.00 (members of ASA, CSSA, SSSA first copy \$ 20.00) Advance payment and 75 cents per book for postage required on all orders outside the U.S.A.

Orders to: Soil Science Society of America, 677 South Segoe Road, Madison, WI 53711, U.S.A.

Pédologie. 2. Constituants et Propriétés du Sol. M. Bonneau et B. Souchier, rédacteurs. Masson, Paris, 1979, 459 p. ISBN 2-225-62931-5.

Le premier des deux volumes de l'ouvrage 'Pédologie', paru en 1977, intitulé 'Pédogenèse et Classification' et écrit par P. Duchaufour, était consacré à l'étude de la formation et l'évolution des sols. Ce second volume concerne l'étude des constituants des sols et de ses propriétés, et aussi comporte lui-même deux parties: la première passe en revue les divers constituants du sol, tant minéraux (argiles) qu'organiques (composés humiques) et met en relief leur interaction réciproque, aussi bien dans la phase solide que liquide. La seconde partie étudie les propriétés physiques et chimiques du sol, envisagées de façon 'globale': définies en fonction de l'ensemble du milieu du sol.

La rédaction des différents chapitres a été confiée à un ou plusieurs spécialistes de la question traitée.

Commandes: Masson, 120 Bd. Saint Germain, 75280 Paris, France; 14 East 60th Street, New York, NY 10022, U.S.A.

Soil Genesis and Classification, Second edition. S. W. Buol, F. D. Hole and R. J. McCracken. Iowa State University Press, Ames, 1980, 404 p. ISBN 0-8138-1460-X.

This well-known textbook on the principles of pedology, soil morphology, soil composition, weathering and soil genesis, and soil forming processes is now available in a second edition. It contains important updated materials on U.S. Soil Taxonomy and other soil classification systems. Also the section on the FAO-Unesco Soil Map of the World and its legend has been revised to reflect changes since the early 1970's.

New material in this edition relates to the techniques of applying soil information to specific soil uses in the land planning process. The appendix includes ten profiles that illustrate one kind of soil in each order of Soil Taxonomy. The book is well written and profusely illustrated with tables, figures and black and white photographs.

Price: \$ 16.50 plus \$ 1 postage, prepaid.

Orders to: Iowa University Press, South State Avenue, Ames, Iowa 50010, U.S.A.

Bibliography of the Soils of the Tropics. Volume IV, Tropics in General, and Islands of Pacific and Indian Oceans. A. C. Orvedal. Agency for International Development, Washington, 1980, 155 p.

Items in this bibliography of soils of the Tropics were extracted from the collection of bibliographic cards on file at the Soil Classification and Mapping Branch, Soil Survey Classification and Correlation Division, Soil Conservation Service supplemented by searching at the National Agricultural Library, both of the U.S. Department of Agriculture.

The purpose of this bibliography is to make relevant contents of this file readily available to university researchers and others who may find the information useful.

Collection of citations has been under way since 1945. These citations are mainly about soils outside the United States and, collectively, they contribute to knowledge about the geography of soils. Not only citations to soil maps are included in the collection but also thousands of references, which, even though without maps, contribute to an understanding of soils – their distribution, characteristics, classification, environment and use. Because of the interest in soil environment and use, the collection includes some citations to references on geology, geomorphology, landforms, vegetation, climate and land use that contribute to the knowledge about soils of an area and aid in the prediction of kinds of soils, or at least some of their characteristics, where soil maps based on field work are lacking.

There is a small stock of volumes I, II and III available for distribution to libraries and interested scientists.

Price: free of charge.

Orders to: U.S. Agency for International Development, Development Support Bureau, Office of Agriculture, Washington, D.C. 20523, U.S.A.

A Provisional Methodology for Soil Degradation Assessment. FAO, Rome, 1979, 84 p., 6 maps. ISBN 92-5-100869-8.

The three-year joint project of FAO, UNEP (Global Environmental Monitoring System) and Unesco: 'A World Assessment of Soil Degradation – Phase I' drew up soil degradation maps of Africa North of the Equator and the Middle East, showing present soil degradation and the risks on soil degradation. In order to compile these maps a methodology had to be developed. This methodology has been expanded to allow for assessment at other scales as well and is presented here. Of necessity, the methodology is of a provisional nature, as a world wide test at various levels of details could not be undertaken as yet.

Nevertheless, it is hoped that the methodology will be used for soil degradation assessments at different scales and in a broad range of environmental conditions. The publication will be widely distributed for this purpose. After satisfactory testing of the methodology, it is intended to organize an international consultation for final evaluation and decision on follow-up action. The present methodology framework has been developed by the FAO staff assigned to the project with assistance of a panel of experts, working groups and individual consultants on specific subjects.

Persons who intend to cooperate should *write to:* The Director, Land and Water Development Division, FAO, Via delle Terme di Caracalla, 00153 Rome, Italy.

Design of Land Treatment Systems for Industrial Wastes – Theory Practice. M. Overcash and D. Pal. Ann Arbor Science Publishers, Ann Arbor, 1980, 684 p. ISBN 0-250-40291-2.

This book, which contains 14 chapters is addressed to all environmental scientists and engineers engaged in university research and extension, industrial planning and consulting, government policy making and monitoring for law enforcements in wake of the protection of environmental quality by sound waste management practices. This book provides a scientific footing for land treatment and assimilation of all wastes with systematic development of a unified methodology that is practical and universal.

Price: \$ 39.95.

Orders to: Ann Arbor Science Publishers, P.O. Box 1425, Ann Arbor, MI 48106, U.S.A.

Red Soils in Indonesia. P. Buurman, editor. Agricultural Research Reports 889 and Bulletin No. 5 of the Soil Research Institute, Bogor. Pudoc, Wageningen, 1980, 169 p. ISBN 90.220.0715.4.

This Bulletin, 5th and last in a series published on behalf of an Indonesian-Dutch technical assistance programme, contains nine papers on Indonesian upland soils. After an introductory paper that states the progress in the investigation of red soils in Indonesia and gives a review of possibilities and problems, the second paper deals with recent proposals for the Indonesian national soil classification system. The next six chapters deal with all kinds of red soils and in all 57 profiles from Java, Sumatra, Celebes and Borneo are described in detail. Use is made of soil catenas. Nearly all profiles were fully analyzed and emphasis is laid on exchange characteristics and mineralogical composition. Soils are classified according to the U.S. Soil Taxonomy and the FAO-Unesco system.

The ninth chapter describes correlations between exchange characteristics at various pH, Base saturations, Exchangeable Aluminium, pH, etc, on the basis of over 400 analyzed samples.

Methods are described in the last section of the book: calculation programs for handheld computer, the use of a suction device for the preparation of clay specimens for X-ray diffraction, and a list of analytical methods.

Price: Dfl. 60.00 plus postage.

Orders to: Pudoc, P.O. Box 4, 6700 AA Wageningen, The Netherlands.

Proceedings of Second International Soil Classification Workshop. Part I, Malaysia. F. H. Beinroth and S. Paramananthan, editors, 345 p.; **Part II, Thailand.** F. H. Beinroth and S. Panichapong, editors, 432 p. Soil Survey Division, Bangkok, 1979.

Since 1976 the University of Puerto Rico has been concerned with the improvement of the taxa established in the U.S. Soil Taxonomy for soils of the lower latitudes. The strategy in these activities has been to collaborate with international committees created to re-examine relevant aspects of the U.S. Soil Taxonomy and to hold workshops with field tours in countries where the soils under scrutiny can be studied in situ. National institutions have been centrally involved in these endeavors. The first such workshop was held in Brazil in 1977 in cooperation with the Serviço de Levantamento e Conservação de Solos and future workshops are contemplated for the Near East and Africa.

The second International Soil Classification Workshop held in Malaysia and Thailand in 1978 thus formed part of a comprehensive international effort to adapt the U.S. Soil Taxonomy to the edaphic conditions of the tropics and subtropics. It addressed mainly the respective mandates of the International Committee on the Classification of Alfisols and Ultisols with Low Activity Clays (ICOMLAC) and the International Committee on the Classification of Oxisols (ICOMOX).

Part I of the Proceedings contains the papers presented at the Kuala Lumpur conference sessions and the descriptive and analytical data for the soils studied during the field trips in Malaysia. Part II contains similar materials for the Thailand portion of the workshop. The Proceedings constitute a reference publication on the taxonomy of tropical Alfisols, Ultisols and Oxisols in general, and key soils of Southeast Asia in particular.

Price: \$ 20.00 plus \$ 10.00 postage for the set of two reports.

Orders to: Soil Survey Division, Land Development Department, Bangkok, Bangkok 9, Thailand.

Slide Set International Soil Classification Workshops, Brazil 1976, Malaysia and Thailand 1978, Syria and Lebanon, 1980. International Soil Museum, Wageningen, 1981.

This set contains 153 slides and shows a representative selection of soils and landscapes of the sites visited during these three workshops. An index gives the taxonomic names and locations of the soils, but for more data the relevant proceedings should be consulted.

The slides can be bought per workshop or as a complete set as follows: Brazil, 51 slides (some of fair quality only), price \$ 30.00 including postage (see Bull. 52, p. 50 for workshop and Bull. 57, p. 37 for proceedings); Malaysia and Thailand, 56 slides, price \$ 30.00 including postage (see Bull. 55, p. 30 for workshop and this Bull. for proceedings);

Syria and Lebanon, 46 slides, price \$ 25.00 including postage (see Bull. 56, p. 23 for workshop; proceedings in print);

Full set, 153 slides, price \$ 80.00 including postage.

Orders and enquiries, preferably before 1 June 1981, to the Director, International Soil Museum, P.O. Box 353, 6700 AJ Wageningen, the Netherlands. Because of the high reproduction costs, copies will only be made available if a sufficient number of slides is ordered. Please pay upon the receipt of a pro-forma invoice only.

Proceedings 8th National Congress, Soil Science Society of Southern Africa. J. le Roux, E. Verster and R. A. Wood, editors. Technical Communication No. 165, Dept. of Agricultural Technical Services, 1980, 215 p. ISBN 0-621-05310-4.

The Eighth National Conference of the Soil Science Society of Southern Africa was held in Pietermaritzburg from 10 to 14 July, 1978, with the theme 'Advances in Soil Science in Southern Africa, 1953-1978'.

The theme was chosen to commemorate the silver jubilee of the foundation of the Society. In part I of the Proceedings, therefore, a series of invited papers deal with local advances over the past 25 years in the various divisions of Soil Science, viz. soil classification and genesis, soil survey and land use, irrigation management, soil physics, soil chemistry and land-use planning. In part II of the Proceedings 18 submitted papers deal with more recent advances in various facets of soil chemistry, soil fertility, pedology, and soil-water relationships.

Price: about US\$ 10.

Orders to: Division of Agricultural Information, Private Bag X 144, Pretoria, South Africa.

Proceedings Fifth International Congress on Soilless Culture, Wageningen, 1980. ISOSC, Wageningen, 1980, 566 p.

The International Society for Soilless Culture is an international non-governmental organisation, founded in 1955 and has over 300 members in 54 countries. Its purpose is the promotion of research and the application of soilless culture. The fifth congress was attended by 175 persons.

The proceedings contain 50 papers on many aspects of hydroponics, e.g. plant nutrition by nutrient solutions, new developments on nutrient film culture (NFT), rockwool culture, hydroculture of office landscaping and roofgardens, sand culture, etc.

The organizers are to be congratulated on the timely publication of these proceedings.

Price: Dfl. 110.00 including airmail postage, pre-payment required.

Orders to: Secretary-General ISOSC, P.O. Box 52, 6700 AB Wageningen, the Netherlands.

Pédologie appliquée. J. Boulaïne. Masson, Paris, 1980, 220 p. ISBN 2-225-64350-4.

Ce livre de J. Boulaïne, professeur de pédologie à l'Institut National Agronomique de Grignon, complète une série d'ouvrages publiés chez le même éditeur et consacrés aux développements récents de la pédologie. Cette 'science des sols' arrive à maturité: ses démarches, ses concepts, ses méthodes commencent à se fixer.

Parallèlement, les applications se multiplient: la pédologie joue un rôle dans la solution de problèmes techniques nombreux, et des choix essentiels à l'aménagement du territoire prennent maintenant en compte un inventaire des sols. C'est le cas de la plupart des investissements agricoles, mais aussi de l'urbanisme, des travaux publics, et de décisions dans des domaines variés allant de la protection de l'environnement à l'architecture, et à l'épuration des eaux usées, tandis que des sciences très variées sont éclairées d'un jour nouveau par l'approche pédologique: hydrogéologie, préhistoire, géochimie, sédimentologie, etc.

L'ouvrage comporte trois parties très différentes: la partie centrale (la deuxième), très pratique est consacrée à la démarche cartographique qui est le pivot de toute application pédologique puisque le sol est une entité liée à la surface terrestre. Elle est entourée d'une présentation très théorique (1re partie) et d'une revue forcément succincte, des différents domaines d'application de la pédologie (3e partie).

Une préface de G. Aubert présente l'ouvrage, qui est abondamment illustré et cité, à titre d'exemples, de nombreux travaux réalisés depuis 20 ans par les pédologues français en métropole et dans le monde.

Prix: FF 150.

Commandes: Masson, 120 Boulevard Saint-Germain, 75280 Paris Cédex 06, France.

Methods for evaluating biological nitrogen fixation. F. J. Bergersen, editor. John Wiley & Sons, Chichester and New York, 1980, 702 p. ISBN 0-471-27759-2.

The purpose of this book is to bring together, from very diverse sources, currently used methods related to biological nitrogen fixation. It is not a set of standard methods but is intended to provide a starting point for scientists entering the field for the first time, or for those who are changing their research activities within the field. It complements the many books and reviews about the current state of knowledge, which have been published recently. Each contributing author has written about the methods which he knows best. This may introduce some bias but also lends authority.

The book begins with basic chapters about laboratory methods and progresses (10 contributions) to subjects which are essential for field studies (5 contributions).

Methods as widely separated as basic instructions for isolating and culturing diazotrophic microorganisms, methods for transferring DNA by means of plasmids and how to conduct a field experiment with nodulated legumes, are described in clear 'how to do it' terms.

The book has an index to diazotrophic microorganisms, an index of nodulated legumes and an index of N_2 -fixing, non-leguminous plants. It contains over 1400 references.

Price: £ 38.00.

Orders to: John Wiley & Sons, Distribution Centre, Shripney, Bognor Regis, West Sussex, England PO22 9SA; or: 605 Third Avenue, New York, NY 10016, U.S.A.

Land Aridization and Drought Control. V. A. Kovda. Westview Press, Boulder, 1980, 277 p. ISBN 0-89158-259-2

This practical approach to irrigation, salinity control, and non-irrigation farming emphasizes the importance of preventing the secondary salinization of soils that often is caused by efforts to reclaim land through irrigation, as well as by aridity and desertification. Dr. Victor A. Kovda, professor of pedology, Moscow University, director of the Institute of Agrochemistry and Soil Sciences of the USSR Academy of Sciences, and former president of the ISSS, treats the phenomena of aridization, drought, and soil salinization as part of larger changes in the biosphere, and he discusses the effects and the prevention of soil salinization at three levels: local/national, regional, and international. Explaining that secondary salinization is affecting the biospheric mechanism responsible for photosynthesis, the cycling of carbon dioxide, oxygen, and nitrogen, the formation of the ozone shield, etc., he points out that its negative consequences are not only social and economic – they are globally destructive.

In the foreword, Dr. Walter Orr Roberts states that this book deserves to serve as a handbook for sound management in countries seeking to expand agriculture into regions that can benefit from irrigation systems.

Price: £ 18 plus postage.

Orders to: Bowker Publishing Company, Erasmus House, Epping, Essex CM 16 4BU, England. In the U.S.A.: Westview Press, 5500 Central Avenue, Boulder, Colorado 80301, U.S.A.

Soil Science Simplified. M. I. Harpstead and F. D. Hole. Iowa State University Press, Ames, 1980, 121 p. ISBN 0-8138-1515-0.

This book is written for those who want an illustrated summary of basic information about soil science. It is a guide to the study of soils for both laypersons and natural scientists. The authors define 'soil' and describe its function in the landscape for the benefit of plants, animals, and human beings. They explain the anatomy of soil and how it develops and show classification (U.S. Soil Taxonomy) and distribution of the various types of soils. This compact book is well-illustrated and offers a concise explanation of the fundamental concepts of soil science.

Price: \$ 7.75 plus \$ 1 for postage.

Orders to: Iowa State University Press, South State Avenue, Ames, Iowa 50010, U.S.A.

Soil and Water Conservation for Productivity and Environmental Protection. F. R. Troeh, J. A. Hobbs and R. L. Donahue. Prentice-Hall International, Englewood Cliffs, 1980, 718 p. ISBN 0-13-822-155-3.

Soil and water conservation deals with the wise use of these important resources. Wise use requires knowledge, understanding, and value judgment. The hazards posed by erosion, sedimentation, and pollution, and the techniques needed to conserve soil and maintain environmental quality are all treated in this book. Situations and examples are drawn from many places constituting a cross-section of the soils, climates, and cultures of the world. The scope includes agricultural, engineering, mining, and other uses of land.

Soil and water have always been vital for sustaining life, and these resources are becoming more limited and crucial as population increases. The importance of conserving soil productivity and protecting the quality of both soil and water is becoming clear to more people than ever before.

Much of this book can be read and understood by anyone with a good general education. Some parts, however, necessarily assume an acquaintance with basic soil properties. The U.S. system of Soil Taxonomy is followed in this book.

All 20 chapters are followed by a summary, questions and references. Appendices contain a list of conversion factors, names of plants mentioned in the text and a series of suggested laboratory exercises. This textbook is profusely illustrated with black and white photographs and many tables and graphs.

Price: \$ 33.70.

Orders to: Prentice-Hall, Englewood Cliffs, NJ 07632, USA; or Prentice-Hall International, 66 Wood Lane End, Hemel Hempstead, Herts. HP2 4RG, England.

Profitable Soil Management, Third edition. L. L. Knuti, D. L. Williams, J. C. Hide. Prentice-Hall, Englewood Cliffs, 1979, 294 p. ISBN 0-13-729400-X.

Profitable Soil Management contains a treatment in simple language of soil science, soil management, and soil and water conservation. Attention is given to soil in the city and in the country. The authors present soil knowledge in relation to farm, ranch, horticultural, forest, prairie, yard, and garden crops and plants.

Contents include (1) an introductory explanation of what soil management is and why it is important; (2) a definition of soil and detailed accounts of its origin, classification, and major parts; (3) an analysis of how plants grow and the effect of environment upon growth; (4) a treatment of soil improvement, with sections on essential soil elements, soil reaction, acid soils, alkaline soils, fertility tests, chemical and organic fertilizers, drainage, and irrigation; (5) a description of conservation of soil and water in the nation and within the cultivated field; (6) a treatment of tillage practices and equipment; and (7) a complete chapter on land judging.

This book contains more than 225 photographs and diagrams to help simplify and illustrate the material. Each chapter features study questions, class activities, and laboratory and field exercises and demonstrations. The book has also a glossary.

Price: \$ 27.15.

Orders to: Prentice-Hall, Englewood Cliffs, NJ 07632, USA; or Prentice-Hall International, 66 Wood Lane End, Hemel Hempstead, Herts. HP2 4RG, England.

Anaerobic Digestion. D. A. Stafford, B. I. Wheatley and D. E. Hughes, editors. Applied Science Publishers, London, 528 p. ISBN 0-85334-904-5.

This book, which contains the proceedings of the First International Symposium on Anaerobic Digestion held in Cardiff, 17-21 September 1979, presents a wide range of papers contributed by international experts.

An ever increasing demand for alternative energy resources has stimulated new interest in the production of methane gas from waste materials. Additional 'spin-offs' from the process, known as anaerobic digestion, are the reduction in the pollution load of these wastes and the production of useful solid and aqueous residues for land fertilisation or animal feed supplements.

The book contains the following parts: I. The basic process of anaerobic digestion (3 papers); II. Microbiology of anaerobic digestion (3 papers); III. Control of anaerobic digestion (3 papers); IV. Feedstocks for anaerobic digestion (7 papers); V. Engineering of anaerobic digestion (7 papers); VI. Future and economics of anaerobic digestion.

This book contains 100 tables and 171 illustrations.

Price: £ 41.80.

Orders to: Applied Science Publishers, 22 Rippleside Commercial Estate, Ripple Road, Barking, Essex.

Laboratory Manual for Introductory Soil Science, Fifth edition. H. D. Foth, L. V. Withee, H. S. Jacobs and S. J. Thien. Wm. C. Brown, Dubuque, 1980, 135 p. ISBN 0-697-05854-9.

This manual contains 15 exercises, each divided into an introduction to the subject, the laboratory procedure, and data and question pages. The exercise include: the soil as a natural body, soil texture, soil water, weathering of minerals, soil testing, organic matter, and the use of U.S. soil survey reports.

Although the manual is written for use by American students, most of it can be used with little or no modification in other countries. It may also serve teachers for devising their own manual. It is well-written and illustrated.

Price: \$ 8.60 plus postage.

Orders to: Wm. C. Brown Company Publishers, 2460 Kerper Boulevard, Dubuque, Iowa 52001, U.S.A.

Applied Soil Trace Elements. Brian E. Davies, editor. John Wiley & Sons, Chichester, New York, 1980, 482 p. ISBN 0-471-27625-1.

There is a rapid increase in interest for trace elements. Not only as micronutrients for plants but also as pollutants and sought-after elements. This volume of monographs gives an account of the knowledge of trace elements in agronomy, chemistry, geology and environmental sciences with respect to their occurrence, role and analysis. The emphasis is laid on the practical aspects of trace elements in soils. After the introduction, chapters are devoted to sampling, analysis, selected essential micronutrients (including sulphur), pollutants, biochemical prospecting, and the application of geochemical techniques to agricultural problems in Great Britain and North America.

Price: £ 22.50.

Orders to: John Wiley & Sons, Distribution Centre, Shripney, Bognor Regis, West Sussex PO22 9SA, England; or: John Wiley & Sons, 605 Third Avenue, New York, NY 10016, U.S.A.

Energy from Biomass in Europe. W. Palz and P. Charter, editors. Applied Science Publishers, London, 234 p. ISBN 0-85334-934-7.

The total amount of solar energy falling on the land area of the countries of the European Community is of the order of 136,000 million tonnes of oil equivalent (Mtoe) per year. Over the sea areas adjacent to the 200 nautical mile limit it is 218,000 Mtoe a year. Compared to this the current Community energy use of something around 1,000 Mtoe per year is small. Part of the solar energy is fixed in terrestrial and aquatic plants which can become sources of direct or indirect energy. The tapping of the vast solar energy resource in this way to supplement European energy supplies is an exciting prospect.

This study arises from a requirement by the Commission of the European Communities Solar Energy R & D Programme, Project E, 'Energy from Biomass', to assess the overall prospects for the development of the use of biomass as a source of energy in the countries of the community.

It examines prospects for biomass for the direct supply of energy, and conversion to other fuels in the light of general factors affecting biomass productivity in Europe, and in relation to the industries and the situations in which they arise. It reviews energy-from-biomass methods and programmes of research in these, concluding with recommendations regarding future research strategies.

The study deals with all sources of grown biomass, including natural vegetation, agricultural and forest waste and surpluses, and specially grown energy crops of all types. Some urban and industrial wastes are considered as potential sources of nutrient for biomass production schemes. However, because of the intimate relationship of animal wastes with farm vegetable wastes, these are included in the study.

Results show that all photosynthetic residues together represent a huge energy reserve, with which the European Community could possibly meet up to 5 % of its current energy needs. Energy crops not involving radical changes in farming practice might provide another 5 % of future needs.

The book contains 53 tables and 9 illustrations.

Price: £ 16.50.

Orders to: Applied Science Publishers, 22 Ripplside Commercial Estate, Ripple Road, Barking, Essex.

Land reclamation and water management. Developments, Problems and Challenges. ILRI publication 27. ILRI, Wageningen, 1980, 191 p. ISBN 90-70-26061-1.

This is a collection of articles, published at the occasion of the silver jubilee of the International Institute for Land Reclamation and Improvement (ILRI), Wageningen, the Netherlands, commemorated on 13 September 1980. The papers deal with land evaluation, reclamation and management of six kinds of problem soils (with world maps showing their distribution), many aspects of irrigation and drainage and a paper on the transfer and retrieval of scientific information.

The articles do not claim to cover all aspects of land and water development in the third world, but show some of the elements on which ILRI concentrates its efforts.

Price: Dfl. 30.00.

Orders to: ILRI, P.O. Box 45, 6700 AA Wageningen, the Netherlands.

Soil Geography and Land Use. H. D. Foth and J. W. Schafer. John Wiley & Sons, New York and Chichester, 1980, 484 p. ISBN 0-471-01710-8.

This soils textbook has a worldwide perspective, with major emphasis on soils of North America (about 300 pages) and secondary emphasis on soils of other continents. The U.S. Soil Taxonomy system of soil classification is used throughout the text.

The short chapters on Africa (34 p.), Asia (38 p.), Europe (30 p.) and the other continents cannot present more than an introduction to the environment, soils and agricultural potential of these vast regions. A 1:50 million soil map instead of the more recent 1:5 million FAO-Unesco Soil Map of the World was used as basic information.

The book is well illustrated with graphs, tables and photographs.

Price: £ 13.00.

Orders to: John Wiley & Sons, Distribution Centre, Shripney, Bognor Regis, West Sussex PO22 9SA, England; or: 605 Third Avenue, New York, NY 10016, U.S.A.

Agrochemicals in Soils. A. Banin and U. Kafkafi, editors. Pergamon Press, 1980, 448 p. ISBN 008-02-59146.

This book contains selected papers from a joint meeting of Commissions II, IV, and VII of the ISSS, held in Jerusalem in 1976.

The nature of the complex interactions between the soil and various chemicals added to it is a scientifically intriguing and practically important subject. Significant activity in this field has been evident in recent years due to the ever-increasing demand for agricultural expansion and intensification in order to fulfill the world needs for food and fiber. Such expansion and intensification is faced with scientific, technological and economic difficulties. Problems of deficiency and excess, of pollution and decontamination confront researchers and practitioners in this field. Their solution calls for quantitative understanding of the soil system and its interaction with chemicals and organisms.

A group of scientists from some 18 countries convened to discuss some of the aspects of this topic. More than 60 papers were presented at the meeting and 40 of them were selected for publication.

The book is divided into four sections. The first two deal mostly with the chemical reactions of agrochemicals in the soil, the third with the movement of agrochemicals in the soil and the fourth with some aspects of agrochemicals and pollution. Each section is opened by one or two invited papers presenting an overview of the topic of the section. Contributed papers follow reporting the results of experimental studies and theoretical analyses of related specific topics.

Price: £ 30 or \$ 68.

Orders to: Pergamon Press, Headington Hill Hall, Oxford OX3 0BW, England; or: Pergamon Press, Maxwell House, Fairview Park, Elmsford, New York 10523, USA.

Loess, A Partial Bibliography. I. J. Smalley. Geo Abstracts Bibliography No. 7. Geo Abstracts, Norwich, 1980, 103 p. ISBN 0-86094-036-5.

This bibliography is a contribution by the New Zealand Soil Bureau to the work of the Loess Commission of INQUA. It contains 1029 references, arranged by author, and a main theme index.

The compiler has done a remarkable job by including a large number of Russian loess publications, since these are usually neither available, nor known in English speaking countries. An essential publication for those interested in loess as a soil or a sediment.

Price: £ 3.75 including postage if prepaid.

Orders to: Geo Abstracts, University of East Anglia, Norwich NR4 7TJ, England.

Soil Classification for England and Wales (Higher Categories). B. W. Avery. Soil Survey Technical Monograph No. 14. Soil Survey, 1980, 67 p.

This monograph brings together in convenient form the definitions to apply the classification to the third of the four existing categories of the system currently in use for detailed as well as for reconnaissance soil surveys. The booklet contains the definitions of the differentiating criteria and of the major soil groups (10), groups (43) and subgroups (118).

The appendix gives a correlation of the major soil groups and soil groups with the U.S. Soil Taxonomy and units of the FAO/Unesco Soil Map of the World.

Price: £ 1.00 plus postage.

Orders to: Soil Survey, Rothamsted Experimental Station, Harpenden, Herts. AL5 2JQ, England.

Applied Soil Physics. R. J. Hanks and G. L. Ashcroft. Springer-Verlag, Berlin, Heidelberg and New York, 1980, 159 p. ISBN 3-540-09457-1 (in U.S.A.: 0-387-09457-1).

This book is volume 8 in Springer's Advanced Series in Agricultural Sciences and discusses the basic concepts of soil water and heat flow. Soil water content and soil water potential are discussed and related to soil water flow and evapotranspiration. One chapter gives the relationships between soil-plant and climate. Soil heat flow and temperature are treated as basic concepts that allow estimates of real world diurnal and annual fluctuations. All chapters are followed by references and questions. In the appendix a practical list of conversion factors. With its many examples and instructive illustrations the approach of this book is highly practical. It offers students and scientists in allied fields a good basic understanding of soil water and heat flow as they are related to practical applied problems.

Price: DM 39.50, cloth-bound.

Orders to: Springer-Verlag, Heidelberger Platz 3, D-1000 Berlin 33, Fed. Rep. of Germany, or 175 Fifth Avenue, New York, NY 10010, U.S.A.

Saline and Alkali Soils of India, Second edition. R. R. Agarwal, J. S. P. Jadav and R. N. Gupta. Indian Council of Agricultural Research, New Delhi, 1979, 286 p.

This re-written revision of the well-known first edition of 1968 starts with the nomenclature and geographic distribution of saline and alkali soils in India, their origin, formation and classification. After chapters on diagnostic techniques and the nature and properties of these soils, much attention is given to reclamation techniques and management, including the use of saline irrigation waters.

Price: Rs. 17.50.

Orders to: ICAR, Krishi Bhavan, New Delhi 110001, India.

A Decade of Research, CSSRI-Karnal, 1979, 209 p.

This book has been prepared at the occasion of the Golden Jubilee of the Central Soil Salinity Research Institute, Karnal, India. After a historical perspective, the publication contains chapters on all the activities of the CSSRI, ranging from soil physics and chemistry, agronomy, and use of saline water for irrigation to demonstration projects and extension education. The book contains a list of publications.

Orders to: Central Soil Salinity Research Institute, Karnal 132001, India.

Handbook on Desertification Indicators. Compiled by P. Reining, Am. Ass. for the Adv. of Science, Washington, 1978, 141 p. ISBN 0-87168-220-6.

This publication is based on the Science Associations' Nairobi Seminar on Desertification (SANSOD) held in 1977 immediately before the U.N. Conference on Desertification.

The indicators form the core of this field manual. Included in it are indications of the methodology appropriate to the acquisition of new data and the analysis of existing data, but much more work will be required to determine the most effective methodology for this integrated set of indicators in the disciplines of the physical, social, and biological/agricultural sciences.

Orders to: American Association for the Advancement of Science, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036, U.S.A.

Challenging Desertification in West Africa. P. Reining, Ohio Univ. Center for International Studies Africa Program, Athens, 1979, 165 p. ISBN 0-89680-102-0.

This publication, no. 39 in the Africa Series, has as a subtitle: Insights from Landsat into Carrying Capacity, Cultivation, and Settlement Sites in Upper Volta and Niger. It shows the capabilities of Landsat for the purposes envisaged; the carrying capacities for ten different soil types and for three villages (settlement-cultivation sites) inhabited by three historically and geographically separate peoples; and the population densities and structures of the three villages. The book contains many plates with the photographs by Landsat and ground views on vegetation, land use, and settlements.

Price: \$ 15.00.

Orders to: Ohio University Press, Athens, Ohio 45701, U.S.A.

Soils and Land Use Planning. Donald D. Davidson. Longman, London and New York, 1980, 129 p., ISBN 0-582-48985-7.

The aim of this introductory book is to present an integrated review of soil assessment procedures based primarily upon the work done in Western Europe, North America, Australia and New Zealand focussing on methods of physical resource assessment relevant to land use planning. The author stresses the frequent lack of awareness on the part of the decision makers about the availability and usefulness of soil data, and urges a more widespread recognition of environmental issues in planning.

The book deals shortly with the methods and techniques used in various countries, the modern developments in land evaluation (FAO Framework for Land Evaluation), soil information systems and soil assessments for particular purposes. A separate chapter is devoted to the application of soil surveys in the Netherlands.

The book is concise and well-written and certainly shows how soil science can be applied to land use planning, stressing to planners the contribution which pedologists can make to their work.

Price: £ 3.95 net.

Orders to: Longman Group, Longman House, Burnt Hill, Harlow, Essex CM20 3JE, England.

R. F. van de Weg, Amsterdam

Soil and leaf analytical methods – their techniques and interpretations. A. M. Mokhtaruddin and H. Aminuddin, editors. Malaysian Soil Science Society and University of Agriculture Malaysia, 1979, 137 p.

These are the proceedings of a seminar held at Serdang, Malaysia, on 9 December 1978, which was attended by 89 Malaysian soil scientists, agronomists and students. The seminar had the following objectives: 1) to make agronomist, soil scientist and other practising agriculturists familiar with and aware of analytical methods currently practiced in Malaysian laboratories; analytical facilities available in Malaysia; errors and precision on analytical calculus from Malaysian laboratories; and 2) to discuss the use and interpretation of the analytical results obtained for the various major crops in Malaysia.

Orders to: The Malaysian Society of Soil Science, P.O. Box 2644, Kuala Lumpur, Malaysia.

Water in Malaysian Agriculture. E. Pushparajah, editor. Malaysian Society of Soil Science, 1979, 226 p.

This publication contains the proceedings of a symposium on water in Malaysian agriculture, held at Kuala Lumpur, on 16–17 March 1979, which was organized by the Malaysian Society of Soil Science. Seventeen papers were given in 4 sessions on: agrometeorological and hydrological studies (5 papers); water requirements of crops (4); crop-water interactions (4); and water conservation and management (4). The symposium attracted 140 participants from Malaysia; there were also some participants from Indonesia.

Orders to: see above.

Reclamation of Drastically Disturbed Lands. F. W. Schaller and P. Sutton, editors. ASA, CSSA and SSSA, Madison, 1978, 742 p. ISBN 0-89118-052-4.

These are the proceedings of a symposium held to discuss reclamation research related to mining and other land disturbances. The book contains 42 papers.

The subject covers a wide range of interests but emphasizes the reclamation of land disturbed by surface mining of coal. Chapters are also devoted to lands disturbed by sand, gravel, stone and phosphate mining, highway construction, dredge and fill operations, and phosphate mining, highway construction, dredge and fill operations, and revegetation of mine tailings and ponds resulting from copper and uranium mining.

Price: US \$ 21.50. Advance payment and 75 cents postage required on orders outside the U.S.A.

Orders to: Book Order Department. American Society of Agronomy, 677 South Segoe Road, Madison, WI 53711, U.S.A.

Drainage for Agriculture. J. van Schilfgaarde, editor. Agronomy Monograph No. 17. American Society of Agronomy, 1974, 700 p.

Drainage methods have changed drastically within the last generation, hence the need for this addition to the Agronomy monographs series. It complements Agronomy monographs No. 7, *The Drainage of Agricultural Lands*, published by ASA in 1967.

The book contains papers on recent developments in the science of drainage, including current information on field methods, new construction techniques and materials, theories of drainage-flow systems, and models for the study of ground-water flow.

Other topics include: the relationship between drainage and plant growth, drainage and water quality, and the use of physical and computer models in solving drainage problems.

Price: US \$ 16.00. Advance payment and 75 cents postage required on orders outside the U.S.A.

Orders to: see above.

Effluents from Livestock. J. K. R. Gasser, editor. Applied Science Publishers, Barking, 1980, 712 p. ISBN 0-85334-859-2.

The book contains the proceedings of a seminar to discuss work carried out within the EEC under the programme Effluents from Intensive Livestock, and held at Bas Zwischenahn, 2-5 October 1979. The following sessions were held: slurry characteristics and its use for arable crops (12 papers); problems of copper in slurry; modelling; treatment of slurry (8 papers); odour characterization and measurement (6 papers); transmission of diseases and parasites through slurry (2 papers) and the review of the 'Effluents from Intensive Livestock' programme.

Most contributions are followed by a discussion, all sessions are summarized.

Price: £ 40.00.

Orders to: Applied Science Publishers, Ripple Road, Barking, Essex IG11 0SA, England.

Proceedings Symposium Machine Processing of Remotely Sensed Data, West Lafayette, 3-6 June 1980. P. G. Burroff and D. B. Morrison, editors. Purdue University, West Lafayette, 1980, 384 p.

Although these Proceedings reflect the special emphasis on the applications of remote sensing to soils, the total range of papers is broad, covering the general areas of data processing analysis, data processing systems, crop inventory, forestry, land use, soil survey and soil information. The Plenary Sessions on the first day focus on the current and future need for land resource information, future earth resource data acquisition systems, current soil information systems, remote sensing and soil survey, and the future challenge of resource data storage, retrieval, analysis and utilization. The Closing Plenary Session highlights plans for the U.S. operational land satellite program, soil information needs, non-federal information requirements and research priorities for the 1980's.

Price: \$ 25.00 including surface mail charges; prepayment required.

Orders to: IEEE Single Copy Sales, 445 Hoes Lane, Piscataway, NJ 08854, U.S.A., mentioning IEEE Catalogue Number 80CH 1533-9 MPRSD or: ISSS, P.O. Box 353, 6700 AJ Wageningen, the Netherlands.

Trace Elements in the Biological Environment (Pierwiastki Sładowe w Środowisku Biologicznym). A. Kabata-Pendias, H. Pendias, Geological Publishing House, Warsaw, 1979, 300 p. ISBN 83-22-0017-0.

This book provides an overall view on trace elements as components and contaminants of the biological environment. In the first part of the book the geochemistry of trace elements with emphasis on biosphere and anthroposphere is described. In the second part the biological and environmental role of over forty trace elements is presented.

This publication is based on background data reviewing the status of trace elements in air, water, soil, rocks, and also in plant and animal organisms and various wastes throughout the world. The text is well documented with more than eight hundred references and is illustrated with 41 figures and 142 tables. The book is published in Polish, and has an English appendix for contents, figures and tables.

Price: Złoty Polski 110.

Orders to: Wydawnictwa Geologiczne, ul. Rakowiecka 4, 00-975 Warszawa, Poland.

Erosion and Environment. M. Holý. Environmental Sciences and Applications, Volume 9. Pergamon Press, Oxford and New York, 1980, 225 p. ISBN 0-08-024466-1.

The development of society is determined by its capacity to exploit the resources of the biosphere. Some of these resources may in time be exhausted or deteriorated.

The intensive exploitation of soil has gradually disturbed the natural soil cover and has exposed the soil surface to the action of erosion agents, i.e., the destructive effects of water and wind on the soil surface, the dislocation and removal of soil matter from the earth surface and its deposition in areas where the activity of these agents is decreasing.

After an introduction on the effects of erosion on the national economics and the geographical distribution of erosion, chapters deal with the classification of erosion, mechanisms of erosion processes, theories of water and wind erosion and the prediction of the erosion. One third of the book is devoted to various aspects of erosion control. The book contains numerous graphs and photographs illustrating the latest knowledge and experience in the design and implementation of erosion control projects.

Price: \$ 58.00.

Orders to: Pergamon Press, Headington Hill Hall, Oxford OX3 0BW, England; or: Pergamon Press, Maxwell House, Fairview Park, NY 10523, U.S.A.

Physical and Geotechnical Properties of Soils. J. E. Bowles. McGraw-Hill, 1979, 478 p. ISBN 0-07-006760-0.

Geotechnical engineering is the science and practice of that part of civil engineering involving the interrelationships between the geologic environment and the works of people. This text is an up-to-date assemblage of material needed for a basic understanding of this subject matter.

The scope has been deliberately limited to physical properties of soils, soil origins, and those engineering properties and mechanical behavior of soils needed for flow, strength, and stability analyses. The book contains a substantial number of examples, illustrations, and homework problems.

Price: \$ 21.50; DM 61.10

Orders to: McGraw-Hill Book Co., 1221 Avenue of the Americas, New York, NY 10020, U.S.A.; McGraw-Hill House, Shoppenhangers Road, Maidenhead, Berks. SL6 2QL, England; or Lademannbogen 136, 2000 Hamburg 63, Fed. Rep. of Germany.

Desertification. M. R. Biswas and A. K. Biswas, editors. Environmental Sciences and Applications, volume 12. Pergamon Press, Oxford, New York, 1980, 523 p. ISBN 0-08-023581-6.

Desertification is the diminution or destruction of the biological potential of land and can lead ultimately to desert-like conditions: grazing lands cease to produce pasture, dryland agriculture fails, and irrigated fields are abandoned owing to salinization, waterlogging, or some other form of soil deterioration. Desertification is a self-accelerating process, 'feeding on itself', and, as it advances, rehabilitation costs rise exponentially.

The drought in the Sahel, which extended from 1968 to 1973, focused governmental and public attention on the problem of desertification as a whole. In response, the United Nations' General Assembly resolved to initiate concerted international action to combat the spread of desert conditions, and called for a world conference to give impetus to international action. The United Nations Conference on Desertification (UNCOD) was accordingly convened in Nairobi, Kenya, from 29 August to 9 September 1977. The case studies discussed in this book were prepared for this Conference by the following countries: Australia, Iran, Israel, Peoples Republic of China, USSR and the United States.

Price: \$ 87.00.

Orders to: See above.

Geography of Soils (Geografia Gleb). R. Benarek, Z. Prusinkiewicz. State Scientific Publishers/PWN: Warsaw, 1980, 243 p. ISBN 83-01-01076-2.

This book provides an introduction to the history of trends in geographic approach to soils. In the first part of the book fundamental aspects of the pattern of soil distribution throughout the world are described. The second part gives detailed information about the soils of Poland and their agricultural evaluation.

The text is illustrated with 21 tables, 43 figures and 3 soil maps, and is published in Polish.

Price: Złoty Polski 34.

Orders to: Polskie Wydawnictwa Naukowe, ul. Miodowa 10, 00-251 Warszawa, Poland.

Soil Science, with an Introduction to Cartography and Soil Protection (Podstawy Gleboznawstwa z Elementami Kartografii i Ochrony Gleb). F. Kuźnicki, S. Białousz, P. Skłodowski. State Scientific Publishers, PWN/, Warsaw, 1979, 509 p. ISBN 83-01-01001-0.

This is the textbook of general soil science providing information about formation, composition and properties of soils. World and Polish systems of soil classification and evaluation are described in the separate chapters. Current problems of soil degradation and reclamation are emphasized.

The book, published in Polish, is illustrated with several figures and tables. This is a good textbook for students.

Price: Złoty Polski 72.

Orders to: Polskie Wydawnictwa Naukowe, ul. Miodowa 10, 00-251 Warszawa, Poland.

Soil Classification for Soil Survey. B. E. Butler. Monographs on Soil Survey, Oxford University Press, Oxford, 1980, 129 p. ISBN 0-19-854510-X.

The author develops a substantial critique of soil classification. Although much is expected of classification in the way of prediction, no test is commonly practised to see if these expectations are justified in specific applications, particularly in soil surveys. There is evidence that in some cases at least the predictability is of a low order.

The author proposes a procedure which meets some of these objections: it allows the soil classes formulated for a particular project to be tested on the soils of that area before the main mapping of the project area is undertaken. Having evaluated each class the soil surveyor can estimate to what extent the purpose of the survey can be fulfilled and can draw up the schedule of mapping as a technical routine. He may find that the level of orderliness in the classes is so low that mapping is not the best way of presenting them.

After chapters on the nature of soil survey and the concept of orderliness in the soil population, the author outlines his ideas on establishing the soil classification for a soil survey. A number of national soil classification systems are reviewed and discussed.

The monograph ends with the sentence 'the great variety in the approaches to soil classification serve to make the point that we have as yet no general agreement on what should be its basis or its objectives.'

Price: £ 8.00 in U.K.

Orders to: Oxford University Press, Walton Street, Oxford OX2 6DP, England.

Priorities for Alleviating Soil-Related Constraints to Food Production in the Tropics. IRRI, Los Banos, 1980, 468 p.

The green revolution has failed to fulfill expectations in most areas of the world. Yields and production levels are only a fraction of those predicted when the new high yielding cereal varieties were first released in the 1960s. There is a growing recognition that environmental factors are largely responsible for this failure of new crop varieties to live up to expectations.

Soil-related factors are among the most significant environmental constraints on crop production in the developing countries. Through practical experience farmers have favored areas with naturally highly productive soils and have shunned those with the less productive soils. Ignorance of improved technology and lack of inputs have constrained them from improving crop performance in areas with poor soils.

Attempts to identify soil constraints and to develop or adopt technologies to remove them are largely location-specific. But other factors such as research methodologies and the need for communication and cooperation among soil and crop scientists from the different locations suggest the wisdom of a well-organized international approach to the identification and removal of soil constraints.

To review knowledge of soil constraints in developing countries and to explore ways scientists can use to help remove these constraints, an international symposium was convened. Co-sponsored by Cornell University and the International Rice Research Institute (IRRI), the symposium was held at IRRI headquarters in the Philippines, 4-8 June 1979.

The papers in this volume summarize what is known about major soil constraints on both geographic and subject matter bases. Also presented are approaches that might be used to increase the efficiency and effectiveness of research on soils and their management. Special attention is given to international cooperation and to mechanisms to encourage such cooperation.

Price: \$ 10.90 plus postage.

Orders to: Office of Information Service, The International Rice Research Institute, P.O. Box 933, Manila, Philippines.

Also available from: International Soil Museum, P.O. Box 353, 6700 AJ Wageningen.

Development of the Transfer Model and Soil Taxonomic Interpretations on a Network of Three Soil Families Second progress report. Benchmark Soils Project, 1979, 80 p.

The Benchmark Soils Project is an internationally based research project testing and demonstrating that agroproduction technology can be transferred from one location in the tropics to another based on the soil family classification in U.S. Soil Taxonomy.

The second Progress Report of the Benchmark Soils Project presents the results from January 1978 through June 1979. (Results of previous research are found in Progress Report 1, available from the addresses below). Emphasis is on the verification of the hypothesis that soils belonging to the same family, according to Soil Taxonomy, have a homogeneous set of characteristics that can be used to predict crop response and performance under specified levels of management. Experimental results are presented only to the extent needed for the statistical and taxonomic interpretations.

Tests to demonstrate the validity of the transfer hypothesis are addressed from two viewpoints. First, an interpretative approach is used to predict crop yields by matching soil family characteristics to crop requirements. Second, actual yields are analyzed by a statistical model developed to test the transfer hypothesis.

Available from: Benchmark Soils Project, Dept. of Agronomy and Soil Science, College of Tropical Agriculture and Human Resources, Univ. of Hawaii, 3190 Maile Way, Honolulu, Hawaii 96822, U.S.A. or Dept. of Agronomy and Soils, College of Agricultural Sciences, Univ. of Puerto Rico, Mayaguez, Puerto Rico 00708, U.S.A.

The Handbook of Environmental Chemistry. O. Hutzinger, editor. Springer Verlag, Berlin, Heidelberg, New York.

This handbook is the first advanced level compendium of environmental chemistry to appear to date. It covers the chemistry and physical behavior of compounds in the environment. Under the editorship of Prof. O. Hutzinger, director of the Laboratory of Environmental and Toxicological Chemistry at the University of Amsterdam, 37 international specialists have contributed to the first three volumes.

For a rapid publication of the material each volume will be divided into two parts. Part A of the first three volumes appeared in 1980; Part B will follow in 1981. Each volume contains a subject index. Future volumes are planned and will cover analytical chemistry, toxicology, and environmental engineering.

The Handbook of Environmental Chemistry is a critical and complete outline of our present knowledge in this field and will prove invaluable to a wide range of chemists and scientists in related disciplines, geologists, meteorologists, etc.

Most chapters are written to a fairly advanced level and should be of interest to the graduate student and practising scientist.

Volume 1, Part A.

The Natural Environment and the Biogeochemical Cycles. 1980, 258 p., 54 figures, ISBN 3-540-09688-4. Price: cloth DM 98.00.

This part has chapters on transport and transformation of chemicals in air, sea, soil; chemical and photo-oxidation; photochemistry in the atmosphere and at surfaces and interphases; microbial metabolism; plant uptake, transport and metabolism; metabolism and distribution by aquatic animals; laboratory micro-ecosystems; and reaction types in the environment.

Volume 2, Part A.

Reactions and Processes. 1980, 307 p., 66 figures. ISBN 3-540-09689-2. Price: cloth DM 126.00.

This part has chapters on transport and transformation of chemicals in air, sea, soil; chemical and photo-oxidation; photochemistry in the atmosphere and at surfaces and interphases; microbial metabolism; plant uptake, transport and metabolism; metabolism and distribution by aquatic animals; laboratory micro-ecosystems; and reaction types in the environment.

Volume 3, Part A.

Anthropogenic Compounds. 1980, 274 p., 61 figures. ISBN 3-540-09690-6. Price: cloth DM 98.00.

This part has chapters on mercury; cadmium; hydrocarbons; fluorocarbons; chlorinated paraffins; chloroaromatic compounds containing oxygen; organic dyes and pigments; inorganic pigments; and radioactive substances.

Orders to: Springer Verlag, Heidelberger Platz 3, Postfach, D-1000 Berlin 33, Fed. Rep. of Germany, or 175 Fifth Avenue, New York, NY 10010, U.S.A.

International Journal of Remote Sensing. Quarterly. Taylor & Francis, London, ISSN 0143-1161.

The journal, published in collaboration of the Remote Sensing Society, covers the whole field of remote sensing: from the science and technology of data acquisition; the subsequent processing of the data, pattern recognition and the display and interpretation of results; through to the many and varied applications of the data thus obtained.

The journal publishes scientific papers describing original work as well as review papers. The main areas of concern are: principles, methodologies, technologies and techniques of data collection, analysis, interpretation and display; surveying from space, air and water platforms; sensor properties and characteristics; digital and analogue techniques of image processing; pure and applied research in the disciplines in which remotely sensed data is increasingly being used; economic surveys and cost/benefit analysis; education and training.

The journal is edited by an international group, guided in turn by an advisory board composed of research workers in all facets of remote sensing from around the world.

Subscription price (1980): £ 30.00, including postage. Special rate for members of the Remote Sensing Society.

Orders to: Subscription Department, Taylor & Francis Ltd., Rankine Road, Basingstoke, Hants, RG24 0PR, England.

Soil Survey, an international journal.

A new publication is being established, Soil Survey, an international journal for soil survey methods, land evaluation, and their applications to land use planning and land management. Publication will commence in 1981.

Contributions on any aspect of soil survey, land evaluation or their applications are invited. The editors of Soil Survey are David Dent and Anthony Young.

Address: your enquiries to: the Editors of Soil Survey, School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ, England.

Química de Suelos con énfasis en suelos de América Latina (segunda reimpresión). H. W. Fassbender. Instituto Interamericano de Ciencias Agrícolas de la OEA, Turrialba, 1980, 428 p.

This textbook is written for university students who are specializing in soils and fertilizers. It also serves as a reference work for professionals in these fields, since it contains detailed information on chemistry of Latin American soils. This book presents a series of new orientations in soils, especially in their physico-chemical status, which were thoroughly studied in the soils of Central America and Brazil.

The work is divided into three parts: chemical composition, soil properties and nutrients and the traditional concepts in soil chemistry. It comprises 14 chapters, 81 tables and 99 figures. Each chapter has a summary and a selected bibliography.

Price: US\$ 5.50 plus postage.

Orders to: IICA, Turrialba, Costa Rica.

Ecología basada en zonas de vida. L. R. Holdridge. Instituto Interamericano de Ciencias Agrícolas de la OEA, Turrialba, 1979, 216 p.

This book presents an objective system for the classification of terrestrial ecosystems of the world in 'life zones'. They are defined by specific characteristics of major factors of climate, temperature, precipitation and humidity.

The maps of the life zones can be made by using data of meteorological station networks of regions or countries or by the interpretation of the physiognomical aspects of vegetation and land use.

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It is a useful book for universities, as a guide for professionals in land use planning or management or simply for a reader interested in an introduction to ecology.

Price: US\$ 5.00 plus postage.

Orders to: see above.

Física de Suelos, Manual de Laboratorio. W. Forsythe. Instituto Interamericano de Ciencias Agrícolas de la OEA, Turrialba, 212 p.

This manual is especially written for students in preparation for teaching and research in soil physics at agricultural faculties of the universities in South America. The material is planned for 11 weekly practices each with a duration of 3 hours. Besides, the students are supposed to spend additional time for obtaining experimental data.

All experiments of this manual can be performed by regular laboratory equipment but in some cases suggestions are given for the use of easy and low cost instrument.

For the researcher this manual includes methods for the analysis of properties and physical processes correlated with plant growth. It also contains basic concepts of sampling techniques and the statistical analysis.

Price: US\$ 3.50 plus postage.

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Suelos de Cuba. Tomo I. Dirección Nacional de Suelos y Fertilizantes INRA. Editorial Orbe, La Habana, 1975, 352 p. ISBN 84-399-4653-8.

This is a record of the work carried out on the mapping of soils in Cuba between 1964 and 1968. In the 1971 Cuban soil classification system 11 great groups, 21 subgroups and 45 series are recognized. This book contains short descriptions and analytical data of 60 selected profiles. After some general statements on soil fertility, the appendix shows the results of fertilizer trials on four soils.

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Geological Nomenclature, Second edition. W. A. Visser, editor. Bohn, Scheltema & Holkema, Deventer, 1980, 564 p. ISBN 90 313 04 077.

The Geological Nomenclature is a unique geological dictionary. It provides the key to terminology in English, French, German, Spanish, and Dutch. The number of entries is over 11,000.

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