

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**

Secretariat General/S cretariat g n ral/Generalsekretariat: c/o International Soil Museum, 9 Duivendaal,
P.O. Box 353, 6700 AJ Wageningen, Netherlands. Telegram: Sombroek, ISOMUS, Wageningen

President/Pr sident/Pr sident

Dr. J. S. Kanwar, Ass. Director, ICRISAT 1-11-256, Begumpet, Hyderabad 500-016, A.P. India

Vice President/Vice-Pr sident/Vizepr sident

Dr. D. R. Bhumbla, Agriculture Commissioner, Ministry of Agriculture and Irrigation, Dept. of
Agriculture, Krishi Bhavan, New Delhi 110001, India

Past President/Ancien Pr sident/Altpr sident

Prof. Dr. C. F. Bentley, Department of Soil Science, University of Alberta, Edmonton, Alberta
T6G 2E0, Canada

Secretary-General/Secr taire-g n ral/Generalsekret r

Dr. W. G. Sombroek, Director, International Soil Museum, 9 Duivendaal, P.O. Box 353, 6700 AJ
Wageningen, Netherlands

Deputy Secretary-General/Secr taire g n ral adjoint/Stellvertretender Generalsekret r

Prof. Dr. I. Szabolcs, Director, Research Institute of Soil Science and Agricultural Chemistry,
Hermann Ott  ut 15, Budapest 11, Hungary

Treasurer/Tr sorier/Schatzmeister

Dr. D. Gabriels, University Gent, Coupure Links 533, B-9000 Gent, Belgium

Honorary Members/Membres Honoraires/Ehrenmitglieder

Dr. G. Barbier (France), Dr. R. Bradfield (U.S.A.), Dr. V. Ignatieff (Canada), Dr. Y. Ishizuka (Japan),
Dr. Ch. E. Kellogg (U.S.A.), Prof. Dr. L. Krolkovski (Poland), Prof. Dr. S. Mattson (Sweden), Prof.
A. Oudin (France), Prof. J. A. Prescott (Australia), Dr. L. A. Richards (U.S.A.), Prof. Dr. A. A. Rode
U.S.S.R.), M. L. Vettori (Brazil)

Commissions/Commissions/Kommissionen - Chairmen/Pr sidents/Vorsitzenden

- I. Soil physics/Physique du sol/Bodenphysik**
Dr. D. R. Nielsen, Dept. of Water Science and Engin, Univ. of California, Davis, CA. 95616, USA
- 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, Ca-
nada
- 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

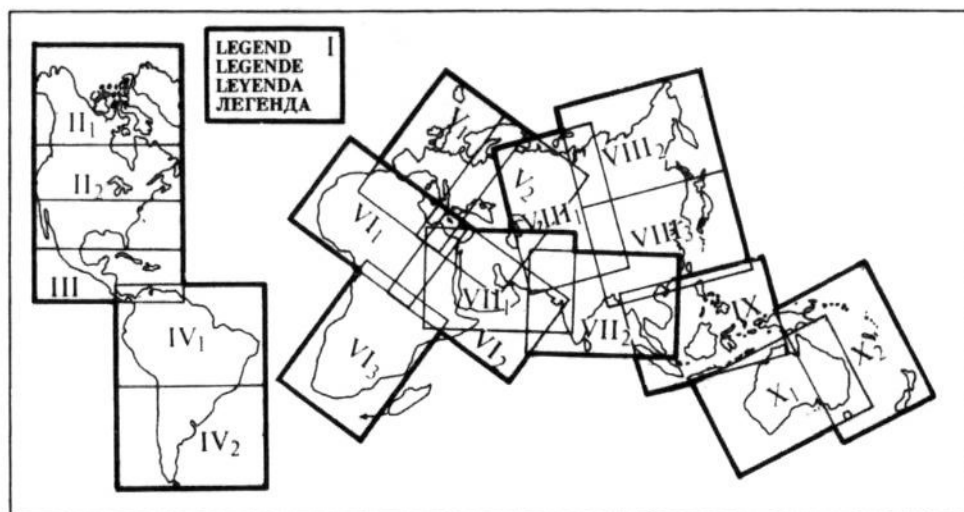
The Officers of the International Society of Soil Science
Le Bureau de l'Association Internationale de la Science du Sol
Der Vorstand der Internationalen Bodenkundlichen Gesellschaft

UNESCO & FAO

announce the completion of the
annoncent la parution de la
melden die Fertigstellung der

SOIL MAP OF THE WORLD CARTE MONDIALE DES SOLS WELTBODENKARTE

1:5.000.000



**19 Sheets/
19 Feuilles/
19 Blätter**

**10 Explanatory texts/
10 Textes explicatifs/
10 Erklärungsbände**

Price/Prix/Preis (F.F.)

		Text volumes	Sheets
I	Legend (E, F, S, R)	25	50
II 1-2	North America (E, F)	60	50
III	Mexico-Central America (E, S)	35	50
IV 1-2	South America (E, S)	48	50
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	n.y.a.	50
X 1-2	Australasia (E)	70	50

Orders/Commandes/Bestellungen:

**PUB, Unesco, Place de Fontenoy,
75700 Paris, France or National
Unesco Sales Agents**

Also available at the International Soil Museum, Wageningen, The Netherlands

International Society of Soil Science (ISSS)
Association Internationale de la Science du Sol (AISS)
Internationale Bodenkundliche Gesellschaft (IBG)

- REGISTRATION FOR MEMBERSHIP/DEMANDE D’AFFILIATION/AUFNAHMEAN-TRAG
- CHANGE OR CORRECTION OF ADDRESS/CHANGEMENT OU CORRECTION D’ADRESSE/ANSCHRIFTENÄNDERUNG
- STATEMENT ON SPECIAL INTERESTS/DÉCLARATION D’INTERÊTS SPECIAUX/ANZEIGUNG VON SPEZIALINTERESSEN

- Please return this form, completed at both sides, to the Treasurer ISSS: Dr. D. Gabriels, Coupure Links 533, B-9000, Ghent, Belgium.
- *Veillez bien renvoyer ce formulaire, complété de deux côtés, au Trésorier AISS: Dr. D. Gabriels, Coupure Links 533, B-9000, Gand, Belgique.*
- Bitte senden Sie dieses Formular, ausgefüllt an beiden Seiten, zum Schatzmeister IBG: Dr. D. Gabriels, Coupure Links 533, B-9000, Gent, Belgien.

* Name
* Nom
* Name

First name(s) or initials
Prénom(s) ou initiales
Vorname(n) oder Initialen

Title and/or function
Titre et/ou fonction
Titel und/oder Tätigkeit

Address (Institution & Dept., Street and no., P.O. Box, Town & Zipcode, Country)
Adresse (Institution et Département, Rue et no., Boîte Postale, Ville et Code Postale, Pays)
Anschrift (Institut & Abteilung, Strasse & No., Postfach, Stadt & Postleitzahl, Land)
.....
.....
.....
.....

Previous country of residence
Ancien pays de domicile
Der vorige Landesort

- * For composite names, please indicate first the part of the name to be used for listing it in alphabetical order.
- * *Pour les noms composés, prière de marquer en premier lieu l’élément du nom à utiliser dans une liste alphabétique.*
- * Bei zusammengesetzte Namen wird gebeten, zuerst den Teil des Namens anzugeben, der in einer alphabetische Folge erscheinen soll.



Note for present members

It will be endeavoured to have the specific professional interests systematically recorded in the Society's semi-automated membership administration at Ghent, for selective forwarding of information on forthcoming activities of Commissions and Working Groups. Please tick off your interests and send this form, with your address indicated on the reverse side, to the Treasurer ISSS.

Note pour les membres actuels

On essaiera d'enregistrer systématiquement les intérêts professionnels spécifiques dans l'administration semi-automatisée des membres à Gand, pour envoyer de l'information sélectionnée concernant les activités futures des Commissions et des Groupes de Travaux. Veuillez noter vos intérêts et envoyer cette formule avec votre adresse indiquée à l'envers, au Trésorier de l'AISS.

Bemerkung für gegenwärtigen Mitglieder

Es werde versucht worden die professionellen Spezialinteressen systematisch einzutragen in die semi-automatisierte Mitgliederadministration der Gesellschaft in Gent, zur selektierten Zuschickung der Information über zukünftlicher Aktivitäten betreffs Kommissionen und Arbeitsgruppen. Bitte notieren Sie Ihre Interesse und senden Sie dieses Formular, mit Ihrer Adresse, angezeigt an die Hinterzeite, am Schatzmeister IBG.

Specially interested in the activities of/particulièrement intéressé aux activités de/besonders am folgenden Bereichen interessiert:

Commission(s) / Commission(s) / Kommission(en)

- I Soil Physics/Physique du Sol/Bodenphysik
- II Soil Chemistry/Chimie du Sol/Bodenchemie
- III Soil Biology/Biologie du Sol/Bodenbiologie
- IV Soil Fertility and Plant Nutrition/Fertilité du Sol et Nutrition des Plantes/ Bodenfruchtbarkeit und Pflanzenernährung
- V Soil Genesis, Classification and Cartography/Genèse du Sol, Classification et Cartographie/Bodengenetik, Klassifikation und Kartographie
- VI Soil Technology/Technologie du Sol/Bodentechnologie
- VII Soil Mineralogy/Minéralogie du Sol/Bodenmineralogie

Subcommissions/Sous Commissions/Subkommissionen

- A Salt Affected Soils/Sols Salins/Salzböden
- B Micromorphology/Micromorphologie/Mikromorphologie

Working Groups/Groupes de Travail/Arbeitsgruppen

- SC Soil Conditioning/Stabilisation de la Structure du Sol/Bodenstrukturverbesserung (Com. I)
- NO Nomenclature Hydromorphic Soils/Nomenclature des Sols Hydromorphes/Nomenklatur Hydromorphen Böden (Com. V)
- DP Soil Information Systems/Informatique en Pédologie/Informationssysteme in der Bodenk. (Com. V)
- RS Remote Sensing for Soil Surveys/Pédologie et Télédétection/Fernerkundung für Bodenkartographie (Com. VI)
- CS Cryogenic Soils/Sols cryogènes/kryogene Böden (Com. V)
- FS Forest Soils/Sols forestiers/Waldböden (Com. V)
- PP Paleopedology/Paléopédologie/Paleopedologie (with/avec/mit INQUA)
- FT Soil Fertility/Fertilité des Sols/Bodenfruchtbarkeit (Com. IV)
- DS Desertification/Désertification/Verwüstung (Com. V)
- LE Land Evaluation/Evaluation des Terres/Landbewertung (Com. VI)
- HS Humic Substances/Matériaux humiques/Humusbestandteile (Com. II)
- CO Soil Colloid Surfaces/Surfaces des Colloïdes de Sol/Bodencolloïdale Oberfläche (Com. VII)

Preferred Language /Langue préférée/gewünschte Sprache

- English Français Deutsch

Payment/Cotisation/Jahresbeitrag

Payment of the yearly due of US \$5 (or equivalent) will be made:

La cotisation annuelle de 5 dollars E.U. (ou leur équivalent) sera versée:

Der Jahresbeitrag von US \$5 (oder Gegenwert) wird bezahlt:

- through the national society of/par l'intermédiaire de l'association nationale de/durch die Nationalgesellschaft von (country/pays/Land)
- by cheque/par chèque/durch Scheck
- into the account/au compte/auf das Konto: D. Gabriels, Treasurer ISSS, 390.0440957.50, Bank Brussels Lambert, Martelaarslaan, B 9000 Gent, Belgium
- as Unesco coupons/sous forme de bons de l'Unesco/mit Unesco-Kupons

ISSS Commissions I and IV

'CONSERVATION 80'

An International Conference on Soil Conservation will be held at the National College of Agricultural Engineering, Silsoe, Bedford, England from July 21-25 1980. This conference is a sequel to the Workshop on Erosion Assessment in Europe and the United States at the University of Ghent, Belgium in February 1978.

Sessions

There will be four technical sessions, on respectively:

1. Assessment of erosion risk and land classification for conservation design.
2. Design procedures for soil conservation.
3. Conservation practices in erosion models.
4. Economic, social and legislative aspects of soil conservation.

Papers

Agreement has been reached with a commercial firm for publication of preprints of the papers and the proceedings which will include all the papers and the discussions. Conference delegates will receive free one copy of each of the preprints and proceedings. Preprints will be available to conference delegates only, but the proceedings will also be sold commercially.

Visits and Field Excursion

There will be a talk on the soil erosion and conservation research being carried out at the National College of Agricultural Engineering, followed by demonstrations of the laboratory work and visits to the field sites. Optional visits will also be available to the National Institute of Agricultural Engineering and Rothamsted Experimental Station.

A one-day field excursion will provide an opportunity to look at water-eroded fields on clay soils (glacial tills) northeast of Bedford and on loamy soils on chalk south of Cambridge, and also to examine sites in the Fenland of Cambridgeshire where the depth of peat is rapidly diminishing. Discussion will deal with the factors leading to water erosion of fields in lowland England; rates of erosion; distribution of erosion; economic implications; and methods of erosion control. At the peatland sites, the discussion will cover rates of wastage; causes of wastage and its implications; and methods of reducing the rate of peat loss. The field visit will cost £ 5 per head.

Registration and Accommodation

The registration fee will be £ 65. This charge includes the reception, provision of preprints of all the papers and one copy of the final volume of the proceedings.

Accommodation is available on the Silsoe campus in single rooms at a cost of £ 15 per day full-board. Day visitors will be charged £ 4.

A ladies programme will be organised.

Details from: Prof. N. W. Hudson, Chairman of the Organising Committee and Professor of Field Engineering, National College of Agricultural Engineering, Silsoe, Bedford MK45 4DT, England.

ISSS Working Groups DP and RS

THE SIXTH PURDUE SYMPOSIUM ON MACHINE PROCESSING OF REMOTELY SENSED DATA

in conjunction with

INTERNATIONAL SYMPOSIUM ON SOIL INFORMATION AND REMOTE SENSING

of the International Society of Soil Science

June 2-6, 1980, Purdue, USA

Special Theme on Soil Resources

Although the symposium will focus upon the theory, implementation, and novel applications of machine processing of remotely sensed data, special emphasis will be given to applications in soils. With this emphasis on soils the International Soil Science Society (ISSS) will be one of the principal co-sponsors of the symposium. The ISSS working groups on (1) remote sensing for soil survey and (2) soil information systems, participate in the planning and implementation of the soils applications portion of the symposium program.

General Symposium Themes

This call for papers requests presentations on research results in the following three broad areas:

1. Digital representation and understanding of remotely sensed scenes
2. Utilization of digitally processed data related to earth resources
3. Extraction of information from digital remotely sensed and ancillary data related to earth resources.

The program will be designed to provide an opportunity for scientists working in these areas to present current research and applications results and to describe new technological developments and novel applications.

Specific Topical Areas

Representative examples of topics closely related to the symposium themes include:

- New and improved classification algorithms
- Utilization of small computers in the processing of remotely sensed data
- New results in classifier training strategies
- Calibration, correlation and verification of digital remotely sensed data
- Merging of radiometric and ancillary data
- Precision rectification of multispectral scanner data
- Field instrumentation systems
- Preprocessing and image enhancement techniques
- Digital information systems
- Multispectral data as an aid in soil survey
- Inventory and monitoring of land, mineral, crop, forest, range and water resources
- Transferring remote sensing technology

Contributed Papers

The symposium will feature two types of papers - long papers and short papers. Selection of papers will be made by a committee of prominent scientists in the area on the basis of originality, usefulness to others in the field, and clarity of presentation.

A limited number of short papers describing recent results will be accepted for presentation at the symposium. These papers will be selected on the basis of a one-page,

double-spaced typed abstract. Accepted abstracts will appear in the proceedings as submitted by the author(s).

Because of budget constraints the official language for both oral presentations and printed proceedings will be English.

Symposium Proceedings

All accepted long papers will be reproduced in the symposium proceedings, which will be available at the start of the symposium. Accepted short papers will appear in the proceedings in abstract form.

Journal Publication of Outstanding Papers

To provide a mechanism for wider dissemination of top quality papers presented at the symposium, a review committee will recommend that the outstanding papers of each session be published in the professional journal of the appropriate co-sponsoring organization. With the author's approval, copies of the paper and the recommendation of the review committee will be sent to the appropriate journal editor for consideration.

Field Trips

Special field trips will be conducted to demonstrate the use of digital soil information systems and the use digital classifications of satellite-derived data as an aid in detailed soil surveys (scales 1:15,840 and 1: 24,000).

Information: Prof. Marion F. Baumgardner, Laboratory for Applications of Remote Sensing (LARS), Purdue University, 1220 Potter Drive, West Lafayette, IN 47906, USA, Telephone (317) 749-2052

The Symposium will be followed by a Special Short Course at Purdue/LARS on 'Soil Applications of Digital Analysis of Multispectral Data', June 9-13, 1980.

It will comprise tutorial sessions on:

Spectral characterization of the soil scene; Multispectral data acquisition; Data analysis and interpretation; Multispectral classification – and aid in soil survey; Field use and evaluation of multispectral data.

For further information contact: Mr. Douglas B. Morrison, LARS Purdue University, West Lafayette IN 47906, USA

PEDOLOGIE - TELEDETECTION SOIL SURVEY - REMOTE SENSING

Transactions du Colloque AISS sur les applications de la télédétection en science du sol, Rome, 31 août - 9 septembre 1977. 29 articles, nombreuses illustrations, bibliographie, 391 pages, édité par M-C. Girard (E. and F.).

Proceedings of the ISSS Colloquy on the applications of remote sensing in Soil Science, Rome, 31st August-9th September 1977. 29 articles, numerous illustrations, bibliography, 391 pages. Edited by M. C. Girard (E and F).

Commandes/Orders: **M-C. Girard, I.N.A. Paris-Grignon,
Laboratoire de Pédologie, 78850 Thiverval-
Grignon, France.**

Prix/Price: **70 FF or 18 US\$**

Second International Symposium on

ACID SULPHATE SOILS 19-30 January 1981, Bangkok.

The Department of Land Development of the Ministry of Agriculture and Cooperatives of Thailand, in cooperation with the Malaysia Agricultural Development Institute and with the moral support of ISSS, is organising the second international symposium on 'Acid Sulphate Soils, their genesis, classification, reclamation, improvement, and management for rice and dryland crop production'.

Introduction

During the 1st International Symposium in Wageningen, the Netherlands (13-20 August 1972) much information was gathered about sulphide formation and accumulation in sulphide muds, the identification and genesis of acid sulphate soils and their physiography, mapping, and general occurrence.

Attention was paid to the effects of extreme soil acidity on ion exchange, structure stability, aluminium toxicity, nutrient uptake and physiology of plants and soil microorganisms. The viewpoint, however, was mainly theoretical. For such topics as reclamation and management for agricultural use, relatively few new data were made available. These practical problems remain for the most part unsolved and for this reason the 2nd Symposium will be especially concerned with *practical problems of plant growth on acid sulphate soils*.

In connection with these practical problems, attention is drawn to recommendation no. 8 of the 1st Symposium (page XI, Vol I, Proceedings of the International Symposium ILRI publ. no. Vol 18, 1973).

'(The committee recommends) long-term, well-monitored field-experiments with various combinations of reclamation methods and soil-water-crops management systems. These experiments should be conducted in at least two key areas, i.e. in tropical rainy and in wet-and-dry tropical environments. The convention hopes through this recommendation to interrupt the long-standing vicious cycle of insufficient information and abortive trials.

During the last few years several stations for acid sulphate soil research have been erected and it is thought to be worth-while to have a presentation of some of their results in January 1981. The yet unsolved serious problems with agriculture and other land use on acid sulphate soils, however, will need much attention. The organisers would like to include contributions from other sources, besides these of their own, in the Symposium in January 1981. For this reason they would like very much to be informed about any present field-activities which have a bearing on Recommendation No. 8. They would like also to know about any projects that will be carried out in the near future. This will help them to know what information about practical results they can expect to be available at the time of the Symposium or whether it is possible to summarize them for discussion by the time of the Symposium in January 1981.

Preliminary Program

The preliminary program of the 2nd Symposium on Acid Sulphate Soils reads as follows:

Monday 19 January 1981	Opening, general addresses, afternoon session.
Tuesday 20 January	Morning and afternoon sessions
Wednesday 21 January and	
Thursday 22 January	Excursion SE and NE of Bangkok. Visit to experimental stations on Acid Sulphate soils, and demonstration of typical profiles.
Friday 23 January	Morning and Afternoon sessions.
Saturday 24 January	Discussions and Conclusions. Closing.

Papers

Papers on the following are invited:

(1) Sulphide accumulation; (2) genesis; (3) identification; (4) classification; (5) mapping of Acid Sulphate soils; (6) reclamation; (7) management; (8) crop-water-soil models; (9) toxicity, and (10) fertility for either rice or dry-land crops.

Accommodation and tours

Accommodation, including lodging, meals, and conference rooms will be available at AIT (Asian Institute of Technology), 42 km north of Bangkok and 15 minutes from the airport.

A two-day excursion to the countryside around Bangkok is part of the program. A ladies-program will also be arranged.

Post Symposium Excursion in Malaysia

The Symposium will be followed by an excursion to the western coastal plains of Malaysia organised by MARDI (Malaysian Agricultural Research and Development Institute). The program for that excursion reads as follows:

Saturday 24th, afternoon and Sunday 25th: participants will travel from Bangkok to P. Penang.

Sunday evening 25 January: gathering in Georgetown.

Monday 26 January: departure from Georgetown to MARDI Rice Experimental Station Bunbong (appr. 20 miles north of Butterworth). Visit of the Station. Explanation on problems related to the growth of rice (one and two crops) on Acid Sulphate Soils in North Malaysia under a climate with pronounced dry season. Visit and inspection of three profiles south of Alor Star, an Acid Sulphate Soil, a transitional soil and a Non-Acid Soil, all under rice. Travel to Ipoh.

Tuesday 27 January: Ipoh – Kuala Lumpur

Wednesday 28 January: Kuala Lumpur – Banteng.

Oil Palm Research Station at Banteng. Explanation of the problems at the Station. Visit South Plantation on Carey Isle in the estuary of the Lankat river. Inspection of three Acid Sulphate Soils with different depths of the pyritic subsoil and the water management measurements to improve oil palm growth.

Back to Kuala Lumpur.

Thursday 29 January: Kuala Lumpur – Melaka (sightseeing, lunch) – Batu Pahat. Visit West Johore Development Project. Explanation of the problems. Inspection of an Acid Sulphate Soil and a Non-Acid Soil, both under local crops (coconut, bananas and fruitcrops) and farmers' management. Visit an unripe, tidally influenced soil outside the seabank, with coconut. Return to Batu Pahat.

Friday 30 January: Travel Batu Pahat – Reg Rengit.

Visit Agricultural Coconut Experimental Station. Coconut plantations on Acid Sulphate Soils. Explanation and discussion of the problems. Visit and inspection of two Acid Sulphate Soils. Travel Rengit – Pontain Kechil. Lunch. Visit Experimental Area of West Johore Project with three different drainage levels on Acid Sulphate Soils under farmers' conditions. Visit and inspection of three Acid Sulphate Soil profiles. Travel Pontain Kechil – Singapore. Spending the night in hotels. End of the excursion.

Provisional Registration

Those wishing to attend are asked to write to:

S. Panichapongs, Secretary, Second International Symposium on Acid Sulphate Soils, Department of Land Development, Banfhaen, Bangkok 9, Thailand.

CONTENTS/SOMMAIRE/INHALT

Activities of the Commissions and Working Groups <i>Activités des Commissions et Groupes de Travail</i> Tätigkeit der Kommissionen und Arbeitsgruppen	1
News from the National Societies <i>Nouvelles des Associations Nationales</i> Berichte der Nationalen Gesellschaften	10
International Relations <i>Relations Internationales</i> Internationale Verbindungen	19
International Training Courses <i>Courses Internationales de Formation</i> Internationale Fortbildungskurse	21
Meetings, Conferences, Symposia <i>Réunions, Conférences, Symposiums</i> Tagungen, Konferenzen, Symposien	25
New Publications <i>Nouvelles Publications</i> Neue Veröffentlichungen	29
News from the ISSS Secretariat and Treasury <i>Nouvelles du Secrétariat et de la Trésorerie de l'AISS</i> Mitteilungen des IBG-Sekretariats und der Kassenverwaltung	48

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

ISSS Commission II

The International symposium **HUMUS ET PLANTA VII** was held at the Agricultural University of Brno, Czechoslovakia, from 29th to 24th August 1979. 145 scientists from twenty countries participated in the symposium.

Mr. J. Šabík, Vice-Minister of Agriculture of the Czechoslovak Federal Government, gave the opening speech. Professor Z. Štefl, Rector of the Agricultural University of Brno, greeted the participants on behalf of this modern university, which celebrated the 60th anniversary of its foundation.

The symposium dealt with the following topics: chemical composition, physical properties and behaviour of soil organic matter constituents; biological transformation of organic matter in soils and composts; effects of soil organic matter constituents on plants; organic matter and soil interrelationships; modern methods employed in soil organic matter research.

Ninety papers were presented to the symposium. They represent an overall review of new findings and research results in this field. They demonstrate and stress the significance of soil organic matter in all types of farming systems and the important role of humus in affecting favourable many soil properties, in controlling effectively the mobility and availability of many plant nutrients, and in rendering xenobiotic substances harmless or less harmful.

Although the present state of knowledge and recent research achievements are a solid base for a rational utilisation of traditional and newly found resources of organic matter for the improvement of soils and life environment, there is still much left for further research, that needs a deeper insight and better understanding.

The participants highly appreciated the usefulness of the **HUMUS ET PLANTA** symposiums in elucidating many existing problems in humus formation and decomposition, and in its role in agriculture and in nature. They recommended the eighth symposium to be held in Czechoslovakia in 1983. In addition, a recommendation was accepted regarding the main topics of the next symposium.

The symposium was closed by a one-day excursion. The participants visited an I.B.P. (M.A.B.) project, a well-known archeological site, and a collective farm. They appreciated that the symposium, including the excursion, was a remarkably successful scientific event.

L. Pavel, Prague, Czechoslovakia

ISSS Working Group on Paleopedology

NEW BIBLIOGRAPHY OF PALEOPEDOLOGICAL RESEARCH OF THE INQUA COMMISSION ON PALEOPEDOLOGY

By assignment of the INQUA Commission on Paleopedology, A. Ruellan edited in 1974, with the help of numerous colleagues from different countries, a bibliography of paleopedological researches. This bibliography, containing 2300 titles of publications issued before 1971/72, proved to be of extreme importance to all researchers engaged with paleopedological problems. Again by assignment of the INQUA Commission of Paleopedology and in cooperation with colleagues of many countries, a continuation of this bibliography will be edited by A. Bronger and should contain an up-to-date review of paleopedological investigations from 1972 to 1978/79. The final framework (layout) is scheduled to be ready at the end of 1980. All colleagues who have published on paleopedological items in the period mentioned above, are kindly requested to send a list of their researches before 31st of May 1980 to Dr. Bronger.

The paleopedological researches in Part 2 of the bibliography will be arranged in key-words as: sandy soils, loess soils, organic soils, alluvial soils, soil sediments; stratigraphy of paleosols; analytical methods for paleosols: chemical analyses, physical analyses, (clay) mineralogical analyses, micromorphological analyses; dating of paleosols: C-14 method, other isotopic methods, paleomagnetical methods, other dating methods; chronology of soils: Holocene paleosols, Pleistocene paleosols, Tertiary paleosols, pre-Tertiary paleosols; fauna of paleosols (in particular Mammalia, Mollusca), flora of paleosols (in particular palynology); paleosols and prehistory of man and his cultures; soils and paleoclimatology; nomenclature and classification of paleosols. The editor will be grateful for proposals of new key words. Related key words should be indicated – if possible – with each publication.

NOUVELLE BIBLIOGRAPHIE SUR LES RECHERCHES PALÉOPÉDOLOGIQUES DE LA COMMISSION PALÉOPÉDOLOGIQUE DE L'INQUA

En 1974 A. Ruellan, chargé par la Commission de l'INQUA sur la paléopédologie, publiait avec la collaboration de nombreux collègues de différents pays une bibliographie sur les recherches paléopédologiques. Cette bibliographie comprenait avec ces 2300 titres la plupart des publications paléopédologiques apparues jusqu'à 1971/72 et représentait une collection très importante pour tous ceux qui s'occupent des problèmes paléopédologiques. La suite de cette bibliographie sera publiée, de nouveau chargée par la Commission Paléopédologie de l'INQUA et avec la collaboration des collègues de nombreux pays, par A. Bronger et comprendra un inventaire le plus complet que possible des recherches paléopédologiques de 1972 jusqu'à 1978/79.

Comme la rédaction finale de cette bibliographie est fixée avant la fin de 1980, tous les collègues qui ont publié des recherches sur la paléopédologie, dans la période indiquée au-dessus, sont priés d'envoyer avant le 31 Mai 1980 une liste de leurs publications à Dr. Bronger.

Dans la 2^{me} Volume de la bibliographie les recherches paléopédologiques seront rangés selon des mots souches comme: sols sableux, sols loess, sols organiques, sols alluviales, sédiments de sol; stratigraphie des paléosols; méthodes d'analyse des paléosols: méthodes d'analyse chimique, méthodes d'analyse physique, méthodes d'analyse minéralogique (des argiles), méthodes d'analyse micromorphologique; la date des paléosols; méthode C¹⁴, autres méthodes avec des isotopes, méthode paléomagnétique; autres méthodes pour dater; la chronologie des sols, paléosols holocènes, paléosols pleistocènes, paléosols tertiaires, paléosols pré-tertiaires; la faune des paléosols (notamment Mammalia, Mollusca), la flore des paléosols (notamment palynologie); paléosols et la préhistoire de l'homme et ses cultures; sols et paléoclimats; nomenclature et classification des paléosols.

L'auteur recevra avec reconnaissance des propositions pour ajouter d'autres mots souches. Si possible tous les publications devraient être accompagnés de ces mots souches.

NEUE BIBLIOGRAPHIE PALÄOPEDOLOGISCHER ARBEITEN DER KOMMISSION FÜR PALÄOPEDOLOGIE DER INQUA

Im Auftrage der Kommission für Paläopedologie der INQUA gab A. Ruellan unter Mithilfe zahlreicher Kollegen vieler Länder bzw. Erdteilregionen in 1974 eine Bibliographie paläopedologischer Arbeiten heraus, die ca. 2300 Titel der meisten bis 1971/72 erschienenen paläopedologischen Publikationen enthält und damit eine wertvolle Sammlung für jeden, der sich mit paläopedologischen Problemen beschäftigt, darstellt. Eine Fortsetzung dieser Bibliographie wird – wiederum in Auftrag der Kommission für Paläopedologie der INQUA und in Zusammenarbeit von Fachkollegen zahlreicher Länder bzw. Ländergruppen – von A. Bronger herausgegeben und soll ein möglichst vollständiges Verzeichnis paläopedologischer Arbeiten der Jahre 1972 bis 1978/79 enthalten. Da die endgültige Fassung der Bibliographie möglichst Ende 1980 vorliegen soll, werden alle Kollegen, die in dem genannten Zeitraum paläopedologische Arbeiten publiziert haben, gebeten, eine Liste ihrer Arbeiten bis spätestens 31 Mai 1980 an Dr. Bronger zu senden. Für die Bundesrepublik Deutschland wird der Herausgeber selbst die Liste – gegliedert nach Teildisziplinen der Paläopedologie – der Publikationen zusammenstellen.

Die paläopedologischen Arbeiten im 2. Teil der Bibliographie sollen nach Stichworten gegliedert werden wie Sandböden, Lössböden, Organische Böden, Alluviale Böden, Bodensedimente; Stratigraphie von Paläoböden; Untersuchungsmethoden von Paläoböden: Chemische Untersuchungsmethoden, Physikalische Untersuchungsmethoden, (Ton) Mineralogische Untersuchungsmethoden, Mikromorphologische Untersuchungsmethoden; Datierung von Paläoböden: ^{14}C -Methode, andere isotopische Methoden, paläomagnetische Methoden, andere Datierungsmethoden; Chronologie von Böden, Paläoböden des Holozäns, pleistozäne Böden, tertiäre Böden, prätertiäre Böden; Fauna in Paläoböden (insbes. Mammalia, Mollusca), Flora von Paläoböden (insbes. Palynologie); Paläoböden und Frühgeschichte der Menschen und seiner Kulturen; Böden und Paläoklima; Nomenklatur und Klassifikation von Paläoböden.

Für Vorschläge weiterer Stichworte ist der Herausgeber dankbar. Die zugehörigen Stichworte sollten nach Möglichkeit bei jeder Arbeit genannt werden.

Address: Dr. A. Bronger, Geographisches Institut der Universität Kiel, Olshausenstr. 40-60, 2300 Kiel, Federal Republic of Germany.

ISSS Working Group on Remote Sensing for Soil Surveys

The third international Symposium on Remote Sensing will take place from 4th to 9th of May 1981 in Warsaw, Poland. It is organised by

- the ISSS Working Group RS
- the Polish Soil Science Society
- the Institute of Applied Geodesy of the Warsaw Polytechnics

Theme: 'Cartographie des Sols et Télédétection/Soil Mapping and Remote Sensing':

The following three aspects will be discussed:

- Spectral characterisation of soils
- Humidity of soils
- Methodology for different scales of soil mapping

The authors will give short presentations of their papers. Thereupon, there will be discussions in small groups with the authors, on the basis of the full text of their papers. A simultaneous translation french-english-polish is foreseen.

Le 3ème Colloque International 'Pédologie et Télédétection' aura lieu du 4 au 9 Mai 1981, à Varsovie (Pologne). Le Colloque est organisé par:

- le Groupe de Travail RS de l'AISS
- la Société Polonaise de Science du Sol,
- l'Institut de Géodésie Appliquée (Ecole Polytechnique)

Thème: 'Cartographie des sols et Télédétection/Soil Mapping and Remote Sensing'

Les trois aspects suivant seront abordés:

- Caractérisation spectrale des sols,
- Humidité des sols,
- Méthodologie pour les différentes échelles de cartes des sols.

Les auteurs présenteront leur communication rapidement. La discussion s'engagera en petits groupes avec les auteurs, devant les documents que ces derniers exposeront. Une traduction simultanée français-anglais-polonais est prévue.

Das dritte Symposium über Fernerkundung findet dem 4. bis 9. Mai 1981 in Warschau, Polen, statt. Es wird organisiert von

- die IBG Arbeitsgruppe RS
- die Polnische Bodenkundliche Gesellschaft
- das Institut für angewendete Geodäsie des Polytechnikums Warschau.

Thema: 'Cartographie des Sols et Télédétection/Soil Mapping and Remote Sensing'

Die folgenden Aspekte werden zur Diskussion stehen:

- die Spektralcharakterisierung der Böden
- die Feuchtigkeit der Böden
- die Methodologie für verschiedene Intensitäten von Bodenkartierung

Die Autoren werden Kurzvorträge ihrer Manuskripte geben. In kleinen Gruppen werden dann, anhand dieser Manuskripte, mit dem Autor Diskussionen stattfinden. Eine Simultanübersetzung in english-französisch-polnisch ist geplant.

Information: Dr. S. Bialousz, Ul. Belska, 24 M 24, 02.638 Warszawa, Poland.

ISSS Working Group on Soil Fertility.

The working group met on the 4th and 5th of January in the 'Castle' of Rauschholzhausen belonging to the experimental station of the 'Institut für Pflanzenbau und Pflanzenzüchtung der Justus-Liebig Universität Giessen'.

In spite of the very bad weather conditions, 18 members were present as representatives of 11 research centres situated in 6 countries (Austria, Fed. Rep. of Germany, Italy, the Netherlands, Romania and Sweden).

Previous to the conference a meeting was held by the board, for the first time enlarged with four members according to the decision made at Novi-Sad (23–25 May, 1978). The composition of the Board is at the moment:

Chairman:	Dr. h.c. P. Bruin – Groningen, the Netherlands
Vice-Chairman:	Prof. em. Dr. Dr. h.c. E. von Boguslawski – 'Schloss' Rauschholzhausen, Fed. Rep. of Germany
Secretary:	Dr. B. Bretschneider-Hermann, Institut für Pflanzenbau und Pflanzenzüchtung der Justus-Liebig-Universität, Giessen, Exp. Station Rauschholzhausen, 3557 Ebsdorfergrund 4, Fed. Rep. of Germany; assisted by: Ing. – ETH – R. A. Bonjour – Bern, Switzerland
Members:	Prof. Dr. L. Cavazza – Bologna, Italy Prof. Dr. P. Drezgić – Novi-Sad, Jugoslavia Dr. Ir. Th. J. Ferrari – Haren (Gr.), the Netherlands Dr. E. Saalbach – Dülmen, Fed. Rep. of Germany.

The following points came up for discussion:

1. The Chairman defended as a perspective of the working group the thesis: 'The International Working Group on Soil Fertility might grow into a central point with respect to essential field experiments situated in the temperate climate of Europe, if the enlarged board would exert itself for promoting this development'. From this point of view, the chairman called special attention to the symposium about the importance of many-years field experiments held at Grignon in July 1976 (*Annales Agronomiques* 27, 1976, No. 1, p. 487–1087) and to the activities and the research results of the working group itself (aim, development and some research results of the International Working Committee on Soil Fertility – *Bulletin* No. 52, 1977/2 of the ISSS, p. 42–49).
2. The progress with respect to the intended cooperation with the Common Market Commission COST (European Cooperation in the field of Scientific and Technical Research) regarding Project 86: 'The mineral nutrition of field crops – Subtitle: Soil-Humus-Nitrogen' could be reported as follows. The relevant necessary deliberation between the administration of the Common Market and the various countries is taking so much time that an effective cooperation might start on the first of January, 1980 at the earliest.
3. The Secretary-General of the ISSS has put the question to the Chairman, whether the Working Group can extend its scope to programmes of soil fertility trials in the tropics and subtropics. Several link-up possibilities were cited, particularly the so-called 'Benchmark Soils Project', initiated by the Universities of Hawaii and Puerto Rico. Relevant deliberations and information gathering were delegated to the representatives from Rauschholzhausen, Dülmen and Haren (an informal meeting was held at Dülmen, West Germany, on November 16, 1979, with the presence of Dr. H. Ikawa, associate soil scientist of the University of Hawaii).

4. Considering the development of the working group, the board was unanimously of the opinion that the ISDV-series (Internationale Stickstoff Dauer Versuche) should be continued into the fourth rotation (the third rotation of three years has started very recently).

The conference of the working group itself was intended as one of the so-called 'main-themes-meetings', this time devoted to the results of the first two rotations of the ISDV-series.

The ISDV-project is defined as: 'The study of the soil productivity as to yield and quality in relation to soil conditions, to the climate of the habitat, to the nitrogen supply and to the crops'. The crops are situated side by side: summer barley as the test crop; a crop with maximum dry matter production (f.e. sugarbeets, mangolds, maize, middle-early potatoes); winter wheat of which the variety is adapted to the conditions of the habitat. There are 6 levels of nitrogen (NO-N5) with straw-manuring, and 3 levels (NO, N2 and N4) without organic manuring, with sufficient fertilizing of the other basic-nutrients. The straw of the barley object (6 tons/ha dry matter given on time in the rotation to the crop of maximum productivity) is used as organic manure. The choice of the habitats is not limited to a certain soil type but is depending on the texture of the soil (clay, loam, sand). The total number of experiments is 24, spread over 23 research centres and 13 countries.

Two lectures were entirely devoted to the chosen main theme, namely the one given by Dr. Primost (Österreichische Stickstoffwerke, Linz): 'Ergebnisse von 2 Rotationen des ISD-Versuches Steyr' and the lecture by Dr. Bretschneider-Hermann: 'Ertragsergebnisse von 2 Rotationen ISD-Versuch Rauschholzhäusern mit besonderer Berücksichtigung der Wirkung der Strohdüngung'. The results mentioned in these lectures were supplemented with data from the experiments at Braunschweig-Völkenrode and at Oldenburg, as reported by Dr. Bramm and Dr. Klasing. At a preceding meeting of the working group Dr. Hera and Dr. Stupića already reported upon the ISDV-habitats Fundulea (Romania) and Ljubljana and Vič (Jugoslavia) respectively.

Dr. von Boguslawski, leader of the project-group 'Nitrogen mineralization - Nitrogen balance' gave a lecture on 'Boden N und Nährstoffbilanz' for nine habitats and showed clearly the importance of schedule of the ISDV-series for composing nutrient balances. Prof. Dr. P. Limberg, Institut für Acker- und Pflanzenbau der Fakultät für Landbau der Technischen Universität Berlin, gave a lecture on the theme: 'Ertragsfaktoren in Abhängigkeit von Klimafaktoren und Stickstoffdüngung und die Ertragsbildung von Gerste in ISD-Versuchen'. At first an overall picture was given on the development of the discipline 'Ertragsphysiologie'. It may be true that this research branch does not give an insight into the causes of plant growth, but nevertheless it allows very well to give an interpretation of the increase of yield by means of a precise and conscientious micro-phenological description, especially in relation to climate factors. The results obtained on the ISDV-habitat at Berlin with both rotations could be interpreted in a convincing way following this methodology. It will perhaps be possible to continue yield results of different habitats, making use of these phenological data as marks. Prof. Limberg is leader of the project-group 'Yield analysis', whose members are the representatives of the research centres at Keszthely (Hungary), Novi-Sad, Bologna, Linz, Bern, Puch (Munich), Rauschholzhäusern, Hohenheim, Speyer, Louvain, Berlin and Oldenburg.

Dr. Copony (Brasov, Romania) held a lecture on: 'Gemischt quadratische Ansätze zur Berechnung der Beziehung zwischen Witterungsdaten und Ertragsbildung und ihre Anwendung auf die Ergebnisse der IDV-Reihe'. The IDV-series, preceding the ISDV-series, concerned a rotation with three test-crops: oats, potatoes and winter wheat, situated side by side with four fertilization levels (N0P2K2, N1P1K1, N2P2K2, N3P3K3) without applying organic manuring (1957-1968). Dr. Copony had a try at combining the results of different habitats following the statistical methodology mentioned in the title of the lecture. The application of this statistical method had to be restricted to the influence of the following meteorological factors on the yield of winter wheat: temperature, rainfall, and sunshine in some decades of the months April, May, June and July. Ten habitats from the twenty present could be involved in this investigation. The agreement between the estimated yields and the yields found seemed to be satisfactory.

Finally short communications about different subjects were given by Dr. Saalbach (Dülmen), Dr. Aichberger (Linz) and Dr. Kürten (Dülmen).

The working group met again on June 6-8, 1979. Excursions were made to 'Dikopshof', the experimental farm of the University of Bonn at Wesseling; to the experiments of the 'Landwirtschaftliche Forschung Hanningshof' (Ruhrstickstoff AG) at Dülmen; and to the field trials of the 'Landwirtschaftliche Untersuchungs- und Forschungsanstalt Oldenburg'. The meeting itself took place on the 7th of June at Hanningshof. 28 members were present as representatives of 18 research centres situated in 9 countries.

The Board met prior to this conference. Changes of the composition of the board for

the coming years were discussed and the aims of the working group were analysed by the chairman in more detail (systematic treatment of important research results – making contact with other groups as to field experiments on an international scale – introduction of specialised research).

On the conference itself the following lectures were given:

Mr. R. Boon (Louvain) expounded on 'Bestimmung des N-Bedürfnisses auf Lösslehm für Winterweizen nach Untersuchung van N min. 0–100 cm'. The results obtained appeared to be very useful for the extension service.

Prof. Dr. E. von Boguslaroski (Giessen), as leader of the project group 'Nitrogen mineralisation – nitrogen balance'; communicated on: 'Neue Ergebnisse der NO₃-N-Bestimmungen von einigen Standorten der ISDV-Serie'.

Prof. Dr. Schildback (Berlin) lectured on 'Ergebnisse Sommergersten – Qualitätsuntersuchung aus ISDV-Ernten'. Barley samples of the years 1974 and 1975 taken from the ISDV-habitats situated from the north to the south of the temperate climate of Europe (from Uppsala to Bologna) were tested on yield and various qualities. The results could be compared with those obtained with samples of the 'Barley Committee of the European Brewery Convention' averaged over four years.

Prof. Dr. Lang (Keszthely) reported on: 'Nutrition balance of the two ISDV rotations 1972–1977, Keszthely', and Dr. P. W. Kürten (Dülmen) gave a lecture on: 'Bilanzuntersuchungen, ein Hilfsmittel zur Beurteilung des Düngereinsatzes auf dem Standort Dülmen – Auswertung der International Dauerdüngungsversuche (ISDV)'. In both lectures the nitrogen balance data were compared with the nitrogen amount needed for obtaining optimum yields.

Finally Dr. Pascu (Fundulea, Romania) gave an over-all lecture on: 'Experimental results obtained in the framework of the ISDV-experiments during 1977–1979 (Dr. Hera and collaborators)'.

The following 'main-themes-meeting' will be held on the 21st of February 1980 at Rauischholzhausen. A general conference with excursions will take place in Bern from 27th–31st of May 1980.

P. Bruin, Haren, The Netherlands

ISSS Working Group on Soil Information Systems

THE 1978 EDMONTON POSTERS ON SOIL INFORMATION SYSTEMS

During the 11th ISSS Congress the Working Group arranged a display of posters portraying various soil information systems in current use.

By courtesy of the groups presenting their systems, of the Land Resources Research Institute, Ottawa and of the Norwegian Computing Center, Oslo, a number of black-and-white reproductions of these posters are now available.

A set of copies can be obtained, at Norwegian Kroner 30. - including surface postage, from:

Dr. S. W. Bie, Secretary of the Working Group,
c/o Norwegian Computing Center,
P.O. Box 335, Blindern, Oslo 3, Norway.

This secretariat can also provide further information on the various systems.

Information on the forthcoming Australian meeting (cf. ISSS Bulletin 55) can now be obtained from:

Mr. Robert Lance, CSIRO Conference Group,
P.O. Box 225, Dickson, ACT 2602, Australia.

ISSS Working Group on Desertification

The Working Group on Desertification has been established by the International Society of Soil Science, at its Eleventh congress in 1978, in response to the request of the Secretary-General of the United Nations following up a specific General Assembly resolution endorsing the Plan of Action to Combat Desertification, which has been developed and adopted by the United Nations Conference on Desertification in 1977.

More than one third of the earth's land area is arid. Much of it has become desert since the dawn of civilization, and many vulnerable areas are even now being turned into desert. This process has intensified in recent decades, and threatens the future of about 650 million people or that 14 per cent of the world's population who live in the drylands; of this number, between 50 and 80 million people are affected directly by decrease in productivity associated with the current desertification processes. In the past half century, on the southern edge of the Sahara alone, as much as 65 million hectares of once productive land has become desert.

Degradation of soil or its complete destruction is one of the features of desertification. It includes wind and water soil erosion, loss of soil organic matter, deterioration of soil physical properties, soil hardening, decrease or loss of soil fertility; in irrigated lands it includes secondary salinization and alkalization, as well as the waterlogging. The problems of soil degradation and soil loss are central in all the questions of desertification which is closely connected with irrational or inappropriate land use.

Soil scientists over the world have accumulated a large amount of knowledge on the processes and causes involved in degradation of soils in and around arid lands. This knowledge is scattered throughout various institutions and publications. The same could be said about the technology of soil protection and conservation in relation to desertification.

An outline of the functions and programme of the Working Group was already given in Bulletin 54 of December 1978. In the meantime, a working relationship has been established with the IGU Working Group on Desertification In and Around Arid Land (Chairman: Professor J. A. Mabbutt, Australia). Prof. B. G. Rozanov participated in the meeting of the IGU Group in January 1979 at Tucson, Arizona, USA, where he informed the Group on the current activities of the United Nations systems on the implementation of the Plan of Action to Combat Desertification.

Co-operation with the ISSS Working Group on Desertification was recognized and introduced into the project document on the UNEP/FAO/UNESCO/WMO project on desertification assessment and mapping, which is presently being considered by the organizations concerned.

As a preparatory stage to this project, an expert consultation on the principles of critical indicators selection for the desertification assessment and mapping was organized by UNEP from 14 to 18 May 1979 in Geneva. Several members of the Group attended the meeting, including Dr. Dregne (USA), Dr. Hardan (Iraq), Dr. Rozanov (USSR), Dr. Sombroek (Netherlands), Dr. Yaalon (Israel) and Dr. Zavaleta (Peru). Profs. Kovda (USSR) and Szabolcs (Hungary) were also invited but were unable to attend due to other engagements. The IGU Group was represented by Dr. Bannert (FRG), Dr. El-Kassas (Egypt), Dr. Mabbutt (Australia) and Dr. Mainguet (France). The findings of the meeting will be summarized by Prof. H. Dregne and will be made available to present and potential members of the Working Group in the nearest future.

As listed in Bulletin 54, it was originally planned to have a Seminar on the 'Desertification Map of the World' in Nairobi in 1979, and a similar one on 'Soil Degradation due to Desertification' in 1982. The first did not materialize and the timing of the second is rather unfortunate in view of the 1982 New Delhi General Congress of ISSS.

It was also realised that the International conference on 'Aridic Soils, their properties, genesis and management' to be held in Jerusalem, Israel in 1981, would touch upon a number of subjects very close to the programme of the Working Group, and that also quite a number of geomorphologists and other desertworkers would attend this meeting.

Contacts between the Convenor and Organiser of the Aridic Soil Conference and the Secretary of the Working Group, through the Secretary-General ISSS, have led to the following agreement. Instead of the two separate Seminars mentioned above, there will now be a special session within the Jerusalem Conference dealing with the desertification problem. The topic will be (cf. the First Circular on the Aridic Soil Conference, as included in ISSS Bulletin no 55):

'5. Dynamics of soil change under different pattern of soil management; soil degradation and losses under inappropriate land use; amelioration of aridic soils under different land-use systems; methods of soil conservation in arid land, including protection against wind and water erosion, maintenance and increase of soil fertility, appropriate technology of dry farming, irrigation and drainage'.

UNEP of Nairobi will be one of the co-sponsors of the Conference and will support the participation of up to 15 scientists from the developing countries.

For the purpose of international cooperation in the combat against the world-wide menace of growing desertification, the ISSS Working Group invites all interested soil scientists to become a member of the Group by writing to the Secretary or one of the other officers. National Soil Science Secretaries are kindly requested to promote membership from among their own ranks.

Dans le but de la coopération internationale pour le combat contre la menace mondiale de la désertification progressive, le Groupe de Travail de l'AISS invite tous les pédologues intéressés de joindre le Groupe, en écrivant au Secrétaire ou un des autres membres du Bureau. Les Associations Nationales de la Science du Sol sont gentiment priés d'avancer l'affiliation parmi leurs membres.

In der Absicht der internationalen Zusammenarbeit in dem Kampf gegen die weltweite Drohung der zunehmenden Verwüstung, ladet die IBG Arbeitsgruppe alle interessierten Pedologen ein Mitglied der Gruppe zu werden durch ein Schreiben zu richten an den Sekretär oder einen der anderen Vorstandsmitglieder. Die nationalen bodenkundlichen Gesellschaften werden freundlich gebeten die Mitgliedschaft unter ihren eigenen Reihen zu fördern.

Chairman/Président/Vorsitzender :

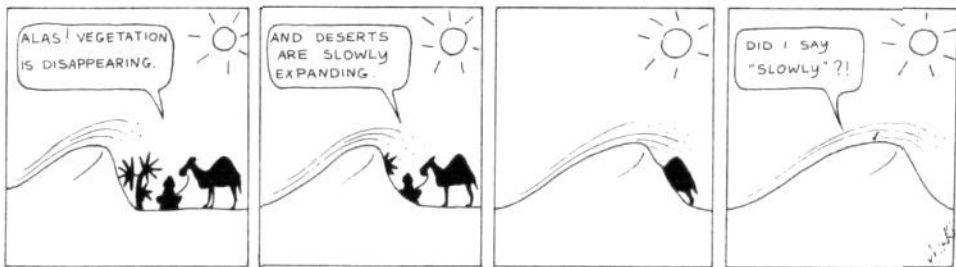
Dr. D. R. Bumbala, Agriculture Commissioner Government of India, Krishi Bhavan, New Delhi, India.

Vice-Chairman/Vice-Président/stellvertretenden Vorsitzender :

Prof. Dr. A. M. Balba, College of Agriculture, University of Alexandria, Chatbi, Alexandria, Egypt.

Secretary/Secrétaire/Sekretär :

Prof. B. G. Rozanov, Chair of Pedology, Faculty of Soil Science, Moscow State University, 117234 Moscow, USSR.



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

Soil Science Society of China

**SYMPOSIUM ON PADDY SOILS; PROPERTIES, CLASSIFICATION AND
MANAGEMENT**

Nanjing, October 19-24, 1980

Introduction

Rice is one of the most important crops in the world. China contributes a large part to world rice production. It is estimated that in China rice constitutes about half of the total food production, covering an area of about 30% of the cultivated land of the country.

Owing to the peculiar water regime, paddy soils possess quite different properties physically, chemically and biologically as compared with those of upland soils. Such properties have a pronounced effect on fertility and management practice of paddy fields.

For the purpose of summing up the past work and opening new prospect, the Academia Sinica plans to organize in 1980 a 'Symposium on Paddy Soils'. We would also like to cordially invite a limited number of foreign scientists who have engaged or are interested in this field to participate in this symposium to read their papers and exchange views with Chinese scientists.

Time and Place

The symposium will be held in Nanjing on October 19-24, 1980, and a post-symposium tour is arranged on October 25-31.

Themes

In addition to the invited papers presented at the plenary sessions, the following three main topics will be discussed:

- (1) Properties of paddy soils
 - a) Physical b) Chemical c) Biological d) Fertility
- (2) Genesis and classification of paddy soils
 - a) Genesis b) Classification c) Paddy soils in soil taxonomy
- (3) Management of paddy soils
 - a) Cultivation and irrigation b) Fertilization c) Rotation system d) Reclamation of low-yield paddy soils

A one-day field trip covering important soil catenas in the suburbs of Nanjing will also be arranged during the symposium.

The working language of the symposium is English.

Post-symposium tour

After the symposium, a 7-day tour will be arranged for examining representative paddy soils as well as their related upland soils in the lower Yangtze Delta, one of the highest-yielding areas in this country.

A guide book for the tour will be prepared by the Organizing Committee.

Information: Prof. Dr. Ching-kwei Li, President, Soil Science Society of China, c/o Nanjing Institute of Soil Science, Academia Sinica, P.O. Box 821, Nanjing, People's Republic of China.

A National Society for Costa Rica!

Information was received on the recent establishment of a national soil science society for Costa Rica. The first Society Officers, serving for the period 1980-1981, are the following:

President: Alfreda Alvarado

Vice President: Alvaro Cordero

Treasurer: Rodolfo Acosta

Secretary: Alexis Vasques.

The *address* is: Sociedad Costa-ricana de la Ciencia del Suelo, c/o Colegio de Ingenieros Agrónomos, Apartado 281, San José, Costa Rica.

The ISSS extends a warm welcome to the Costa Rican Society and wishes it the best of success in its future activities. The first of those is the organisation of the following event:

The 7th Latino-American Soil Science congress. This will take in San José, Costa Rica from June 30th to July 4th in 1980. It is oriented mainly towards Tropical Soils Management and Conservation.

Information: Dr. Alfredo Alvarado, Apartado 281, San José, Costa Rica.

Sociedad Chilena de la Ciencia del Suelo

The third National Symposium on Soil Science will be held in Santiago, Chile in November 1981. The third international Panel on Volcanic Ash Soils is likely to coincide with the Symposium.

Information: Dr. José Rodríguez, President Organizing Committee, Soil Department, Faculty of Agronomy, Catholic University of Chile, Casilla 114-D, Santiago, Chile.

An International Congress on Research in Arid and Semi-arid Zones will be held in La Serena – Chile from 15th to 19th January 1980. The Congress is sponsored by the OAS, the Regional Planning Bureau IV Region Chile, and the University of Chile. The organisation is with the Arid and Semi-Arid Zones Research Program of this University (PRIZAS). The Congress will discuss the following topics: climate as a factor; water resources; soils (morphology, taxonomy, cartography, genetics); botany, fauna and wildlife useful to man; non-traditional energy resources; forage production and primary production for other uses; arid-zone crops; animal husbandry; man and the arid-environment; arid zones development; desert invasion; computer information systems.

Information: Dr. Walter Luzio, National Secretary Organizing Committee, C.I.E.Z.A.S., Av. Paraguay 265, Torre 15, Piso 17, Of. 1703, Santiago, Chile.

Sociedad Colombiana de la Ciencia del Suelo

The 6th Soils Colloquium of the Society took place at CIAT in Palmira, on September 19-21, 1979. The subject was 'Suelos Salinos y Elementos Secundarios en la Agricultura Colombiana'.

Fifteen papers were presented by soil scientists from Colombia, Venezuela, Spain, Australia, Israel, and the U.S.A. This was followed by Panel discussions on a) management of saline and sodic soils: irrigation waters, fertilizer use, agricultural machinery, rotations and sowing methods; b) the use of calcium, magnesium, sodium and sulphates in Colombian agriculture.

Also the annual business meeting of the Colombian Society was held at the time.

Information: Sociedad Colombiana de la Ciencia del Suelo, Apartado Aereo 142, Palmira-Valle, Colombia

Sociedad Ecuatoriana de la Ciencia del Suelo

La Société Equatorienne de la Science du Sol, lors de son deuxième congrès national a élu son Comité Directeur pour une période de deux ans, Juin 1979 – Juin 1981. Les membres suivants ont été élus:

Fausto Maldonado, Dr. Sc., Président
Saúl Mestanza, Ing. Agr., Vice-président
Washington Padilla, Ing. Agr., Secrétaire
Patricio Toledo, Ing. Agr., Trésorier.

Presque cinquante des associés sont aussi membre de l'AISS.

Renseignements: c/o Predesur, Calle Conzález Suarez 318, Apartado 305, Quito, Ecuador.

Sociedade Brasileira da Ciência do Solo

The Seventeenth National Soil Science Congress took place in Manaus from 8th to 13th of July 1979. There were nearly 500 participants and a total of 258 papers were presented, either in plenary sessions or as poster sessions. The latter type proved to be quite popular; it allowed for substantial more time of presentation and discussion than those presented in a very tight schedule at the plenaries.

Major discourses were 'The responsibility of research at the production of food for the requirements of the world' by Professor W. L. Nelson of the U.S.A.; 'The participation of Nitrofertel in the fertilizer programme of Pétrobras' by Dr. A. da Silva Lima; 'The strategy of management of the soil-plant-animal system in Oxisols and Ultisols of Latin America' by Prof. Pedro Sanchez of CIAT; and 'The geochemistry of the land surface and relief forms; role of weathering and pedogenesis in the formation of the relief' by Prof. A. Ruellan of France.

Several Working Groups held specialised meetings, e.g.: the elaboration of a glossary of terms of soil science (coordinator: Jorge Olmos); the revision of the Brazilian Manual for Land Capability Assessment (coordinator: Igo Lepsch); the uniformisation of the teaching curriculae of soil science (coordinator: Alfredo Lopes), and the actual status of the text preparation for the Brazilian system of soil classification (coordinator: Marcelo Camargo).

During the Congress, a general assembly of the Society took place, at which the following Office Bearers for the period 1979-1981 were elected:

Presidente	: Raimundo Fonseca de Souza	
1° Vice-presidente	: Lucedino Paixão Ribeiro	
2° Vice-presidente	: Francisco da Costa Verdade	
Secretário	: Otávio Antônio de Camargo	
Tesoureiro	: José Maria A. S. Valadares	
Conselheiros	: Clotário Olivier da Silveira	Guido Ranzani
	: Sérgio J. Volkweisz	Sebastião F. G. Correia
	: Igo Fernando Lepsch	Alfredo S. Lopes

The congress was followed by a technical excursion that was coordinated by Paulo Klinge Jacomine (SNLCS-EMBRAPA). It led the many participants to representative forest soils on the Manaus-Caracarai and Manaus-Itacoatiara roads. Visits were also paid to the experimental stations of tropical silviculture of INPA/CNPQ, where trials on ecological agriculture were shown; an experimental station on permanent cropping of UEPAE/Manaus; and experimental work on the establishment of cocoa cultivation.

The next national Congress will take place in Salvador, Bahia.

Information: Secretaria Executiva SBSC, c/o Instituto Agrônômico, CP 28, Campinas SP- CEP 13.000, Brasil.

Soil Science Society of America

The 71st combined annual meeting of the American Society of Agronomy (ASA), the Crop Science Society of America (CSSA) and the Soil Science Society of America (SSSA), took place at Ft. Collins, Colorado, from August 5th to 10th, 1969, with nearly 4,500 persons attending.

The theme 'Agronomy-Solving Problems, Serving People' was highlighted by a wealth of papers and addresses at the various plenary or divisional sessions, joint and special meetings, poster sessions, etc.

At the annual Luncheon and General Meeting of the SSSA, the 1979 President-Elect Dr. B. A. Stewart was introduced, and the 1979 President Dr. W. E. Larson took over from Dr. L. M. Walsh. The Secretary-General of the ISSS, who was a guest at the event, brought the greetings and well-wishings of the international soil science community.

The annual presentation of awards included the Emil Truog Award to Prof. Mary K. Firestone (Berkeley), the Soil Science Award to Prof. James P. Martin (Riverside), Honorary Membership to Dr. Ray L. Cook (Michigan) and Dr. H. E. Myers (Arizona), and Fellow status to fourteen distinguished members.

A number of social events brought the necessary relaxation from the near overwhelming array of paper presentations. The next meeting will take place in Detroit, Michigan, from 30th November to 4th December, 1980.

Information: Dr. Matthias Stelly, Executive Vice-President, Soil Science Society of America, 677 South Segoe Road, Madison WI 53711, USA (See also the ASA 'Agronomy News' of Sept.-Oct. 1979).

In Memoriam:

C. C. Nikiforoff, retired soil scientist with USDA (1867-1979)

Constantin C. Nikiforoff, 92, soil scientist, died on April 10, 1979 in Hyattsville, USA.

Dr. Nikiforoff was born in Pskov, Russia. He was educated in Russia and Switzerland and earned a doctorate in soil science from the University of St. Petersburg in 1912.

Initially he conducted soil research expeditions in Siberia, where he studied among other things the frost heavings in the area of the Transsiberian Highway. He then became a soil expert for the Department of Agriculture and Land Improvement in Russia, and was, from 1912 to 1914, a member of the prestigious Dokuchaev soils committee. During World War I, he served as an officer in the Imperial Russian Army.

He left the USSR through Turkey and came to the USA in 1921, where he spent the first years as a farm labourer in New York and Minnesota. In 1927 he was accepted at the University of Minnesota, where he became an instructor and assistant professor of soil science.

He came to Washington DC in 1931 and was employed as a soil scientist for the US Department of Agriculture until his retirement in 1957. He also was a consultant for a number of research agencies and worked as a freelance translator for the Department of State.

At the USDA Soil Conversation Service – Soil Survey Staff 'Niki', as he was popularly known, worked mainly with Dr. Roy Simonson. He took particular interest in the study and safeguarding of the priceless USSR Soil Monoliths collection that was shipped to the USA for exposition at the first International Congress of Soil Science in Washington DC in 1927. He devised the scheme for structure description as it is recorded in the US Soil Survey Manual. He also did pioneering research work on the duripans in California and the fragipans in Maryland.

Dr. Nikiforoff was a member of the Soil Science Society of America, the New York and National Academies of Sciences and the International Society of Soil Science.

There are no immediate survivors.

The Soil Science Society of East Africa

The third Annual General Meeting of the Society took place at Muguga, Kenya, from 25th to 27th July, 1979 – after an unfortunate interruption of 3 years because of political upheavals. There were about 50 participants, from Kenya and Tanzania, and several guest like Prof. Hallsworth (Australia – UK) and prof. Garbouchev (Bulgaria – UNEP). The meeting was chaired by Dr. F. J. Wangati, Acting Director of the Kenyan Agricultural Research Institute KARI (which includes the Kenyan parts or the former EAAFRO).

The guest speaker was Sir Charles Pereira of U.K., visiting professor of the University of Nairobi. For several decades he was intimately associated with EAAFRO – Muguga, working on agricultural meteorology and applied soil physics. In his speech he advised to the acceptance of legumes and slow-release phosphate fertilizers. He also stressed the importance of soil erosion and waterconservation in the dryer parts of East Africa.

Various topics were discussed in the technical sessions, varying from the application of the FAO/Unesco terminology for soil classification, soil suitability for mechanised dry land farming, measurement of soil loss and run-off, and the influence of volcanic ash on soil characteristics, to the effect of soil and fertilizer nitrogen on wheat growing.

A one-day field excursion was organised by Dr. D'Costa and Prof. Ahn and led to the Experimental Farm at Kabete of the University of Nairobi. Several ongoing experiments were inspected and discussed.

At the Business Meeting of the Society it was confirmed that the regional Society should be kept as one unit rather than being split up over the three countries concerned (Kenya, Tanzania, Uganda) even though the political community between these countries had ceased to exist.

The following office-bearers were elected:

Chairman	: Dr. F. J. Wangati, Nairobi
Vice Chairman	: Dr. J. Y. Kitungulu – Zake, Kampala
Secretary	: Mr. J. R. Okalebo, Nairobi
Regional Treasurer Kenya	: Mr. G. Hinga, Nairobi
Regional Treasurer Tanzania	: Dr. A. P. Uriyo, Morogoro
Regional Treasurer Uganda	: open
Committee members	: Dr. S.O. Keya, Nairobi; Mr. N. N. Nyandat, Nairobi; Dr. S. Bhoojedhur, Nairobi; Mr. S. M. Kinyali, Nairobi; Mr. A. O. Moshi, Arusha; Mr. J. K. Samki, Tanga; Uganda member (open).

It was agreed that Uganda should be the venue of the fourth Annual General Meeting.

In his closing address Mr. N. N. Nyandat, Acting Director of the National Agricultural Laboratories in Nairobi, emphasised the need for regional standardisation of methods of soil analysis, and for the preparation of bibliographies. Also the need for a Society's Newsletter was brought up.

Address: Mr. J. R. Okalebo, Secretary SSSEA, ARD/KARI, Muguga, Box 30148, Nairobi, Kenya.

Australian Society of Soil Science Inc.

The National Soils Conference will be held in Sydney from 19th to 23rd May, 1980. Included is a two-days excursion to the Central West Region of N.S.W.

Information: Conference Secretary, Sydney Science Centre, 35-43 Clarence Str. Sydney, NSW 2000, Australia; or: Mr. B. S. C. Wood, Dept. of Soil Science, the University of Sydney, NSW 2006, Australia. •

Société Belge de Pédologie – Belgische Bodemkundige Vereniging

La journée d'études annuelle de la Société Belge de Pédologie, tenue à Louvain le 24 octobre 1979, avait comme thème 'Pédologie et télédétection'. Elle a été organisée par le Laboratoire de Pédogenèse et de Géographie des sols, Faculté de sciences Agronomiques, Université Catholique de Louvain.

Après une introduction générale par le Professeur J. D'Hoore, les communications suivantes ont été présentées et discutées:

- H.S. Teotia: General soil and land use distribution over the northern part of the Indo-Gangetic alluvial plain, deduced from multispectral imagery (Landsat)
- A. M. Oelis-Ceusters: Signatures spectrales de sols non couverts de végétation, obtenues par radiométrie de terrain.
- N. Sougnez: Signature spectrale et assèchement des sols sous herbage (Landsat)
- H. Gulinck: Problèmes de recalibration en vue de l'étude diachronique du verdoisement des paysages (Landsat)
- R. Gombeer: Informations pédologiques fournies par des satellites autres que Landsat (Meteosat, Goes io, HCMM, Seasat...)

Une visite au laboratoire dans l'après-midi a permis d'illustrer la méthode d'étude suivie par des démonstrations d'appareils et par la présentation de divers documents de travail.

Information: Prof. J. D'Hoore, Centre for Tropical Soils Study, Catholic University of Leuven, de Croylaan 42, B-3030 Heverlee, Belgium.

Deutsche Bodenkundliche Gesellschaft

Die Jahrestagung 1979 der Deutschen Bodenkundlichen Gesellschaft (DBG) fand vom 9.–15. September in Freiburg i.Br. statt. Sie war verbunden mit dem 30-jährigen Jubiläum der Wiederbegründung der Gesellschaft nach dem zweiten Weltkrieg (Erstbegründung 1926) und der 25-jährigen Wiederkehr der ersten DBG-Tagung in Freiburg.

An der Tagung nahmen 320 Bodenkundler – darunter Mitglieder und Gäste aus 13 ausserdeutschen Ländern – teil. Während der Vortragstagung wurden in Plenar- und Kommissions-Sitzungen rund 150 Vorträge gehalten. Zum Thema 'Bodenentwicklung und Landnutzung in Mittelgebirge und Vorland' fanden 10 Exkursionen statt (davon eine zweitägige in die Schweiz und eine eintägige in die Zentralvogesen). Eine Ausstellung 'Bedeutung des Bodens für die Wirtschaft in Baden-Württemberg' ergänzte das Tagungsprogramm.

Anlässlich der Tagung wurde ein Bodenkunde-Memorandum 'Stand und Entwicklung bodenkundlicher Forschung' herausgegeben (erhältlich bei der DBG-Geschäftsstelle, 34 Göttingen, von Sieboldstrasse 4).

Die Mitgliederzahl der DBG ist inzwischen auf rund 750 angestiegen.

Die nächste Jahrestagung der DBG findet statt in Berlin, BRD, dem 6.–12.9.1981.

Information: Prof. Dr. B. Meyer, D 3400 Göttingen, von Sieboldstr. 4, BRD.

IN MEMORIAM



Professor Dr. Dr. h.c. F. Scheffer (1899–1979)

Am 1en Juli 1979 verstarb in 80. Lebensjahr Prof. Dr. Dr. h.c. Fritz Scheffer, Ehrenmitglied der Internationalen Bodenkundlichen Gesellschaft seit 1974 und der Deutschen Bodenkundlichen Gesellschaft seit 1971.

Fritz Scheffer wurde am 20. März 1899 in Haldorf bei Grifte geboren. Nach mehreren Studienjahren in Marburg und Breslau (Chemie und Mathematik) promovierte er im Jahre 1926 in Göttingen als Schüler von E. Blanck. Als Assistent der Abteilung Agrikulturchemie im Institut für Pflanzenbau an der Universität Halle/S. habilitierte er sich bei Th. Roemer im Jahre 1931 für die Fächer Agrikulturchemie und Bodenkunde. Die Hallenser Zeit wurde durch die gemeinsame Herausgabe der heute weitverbreiteten 'Ackerbaulehre' Roemer/Scheffer gekrönt.

Im Jahre 1935 übernahm Scheffer die Leitung der Landwirtschaftlichen Untersuchungsanstalt in Kassel-Harleshausen. 1937 erhielt er einen Ruf auf den Ordentlichen Lehrstuhl für Landwirtschaftliche Chemie an der Universität Jena, mit dem gleichzeitig die Übernahme der Thüringischen Landwirtschaftlichen Versuchsstation verbunden war. Im Jahre 1945 übernahm Scheffer als Ordinarius die Leitung des Agrikulturchemischen und Bodenkundlichen Institutes in Göttingen. Hier entwickelte sich in fast 2 Jahrzehnten eine Wirkungssphäre, in der neben der Humusforschung auch wesentliche Arbeiten auf den Gebieten, der Bodengenetik, der Verbesserung der Düngemittel, der Rhizosphären und Wuchsstoffforschung angeregt und durchgeführt wurden.

Durch seine wissenschaftlichen Arbeiten hat Fritz Scheffer sein Institut weit über Deutschlands Grenzen bekannt gemacht. Aus dieser Arbeit entstand u.a. das 'Lehrbuch der Bodenkunde', herausgegeben in Zusammenarbeit mit P. Schachtschabel und viele Fachkollegen und wovon in 1979 die 10. neuarbeitete Auflage erschien.

Seine Leistungen fanden in den verschiedensten Ehrungen ihre Würdigung: die Ehrendoktorwürde der Friedrich-Schiller-Universität Jena, die Mitgliedschaft der Wissenschaften Oslo, weiterhin die Verleihung des Cherubin-Ordens in Gold der Universität Pisa, korrespondierende Mitgliedschaften der Akademie der Landbauwissenschaften Berlin, Stockholm und Helsinki.

In 1949 war Fritz Scheffer einer der Mitgründer der neuen DBG und gehörte zum Präsidium von 1949 bis 1969, im Anfang als Geschäftsführer und ab 1950 als Präsident.

Durch Fritz Scheffers Tod verlieren die Internationale Bodenkundliche Gesellschaft, sondern speziell die Deutsche Bodenkundliche Gesellschaft eines ihrer hervorragendsten Mitglieder.

British Society of Soil Science

The Autumn meeting of the British Society took place on 10-13th September, 1979 at the Nottingham School of Agriculture in Sutton Bonington.

A one-day presentation of local studies was followed by a number of technical excursions in the Derbyshire, Lincolnshire and Nottinghamshire areas.

At the same occasion, the 32nd Annual General Meeting of the Society took place. The following office-bearers were proposed and elected:

President	: Prof. Dr. D. J. Greenland, Reading
Vice President	: Mr. W. Dermott, London
Hon. Secretary	: Dr. D. V. Crawford, Nottingham
Hon. Treasurer	: Dr. T. Batey, Aberdeen
Hon. Editor	: Prof. Dr. A. Wild, Reading
Hon. Asst. Editor	: Dr. D. L. Rowell, Reading
New Council Members	: Messrs. A. J. Smyth, B. D. Soane and R. E. White

Address: D. V. Crawford, Nottingham University, School of Agriculture, Sutton Bonington, Loughborough, LE12 5RD, England

Societatea Nationala Romana Pentru Stiinta Solului

The Romanian National Soil Science Society held its 10th Congress at Brasov from 27 August – 1 September, 1979. About 145 lectures were held on themes of soil classification, soil fertility, soil physics, soil chemistry, land evaluation, land reclamation and soil pollution. Over 260 members and guests of other societies participated in the various activities.

The Congress elected its new Board which is composed as follows:

President	: Acad. Grigore Obrojanu, Vice-president of the Academy for Agriculture and Forestry Sciences.
Vice-Presidents	: Corneliu Răută, Director, Research Institute for Soil Science and Agrochemistry, Bucharest : Mircea Motoc, Professor, Dept. of Soil Erosion, Agricultural College, Bucharest : Cristian Hera, Deputy-director, Research Institute for Cereals and Technical Crops, Fundulea
Secretary/Treasurer	: Dumitru Teaci, Scientific Secretary, Academy for Agriculture and Forestry Sciences
Members	: Gheorghe Vines, Director, Agricultural Research Station, Mărculești : Gheorghe Marin, Researcher, A. R. Station, Brăila

Address: Professor Gr. Obrejanu, ASAS – Bd. Mărăști 61, sector 1 – Bucharest, Romania.

Nederlandse Bodemkundige Vereniging

The 85th Scientific Meeting of the Society was held in Wageningen on November 7th, 1979. The subject was 'Information Systems in Earth Sciences'.

Information: Ir. J. C. Pape, Secretary NBV, c/o Dutch Soil Survey Institute, P.O. Box 98, Wageningen, the Netherlands.

Sociedade Portuguesa da Ciência do Solo

At its last general meeting the Portuguese Society of Soil Science elected the following Executive Board and Delegate to the ISSS for 1979-1982:

President: Prof. Dr. Eng^o Edgar C. Sousa

Secretary: Eng^o Mário A. Mayer Gonçalves

Treasurer: Dr. José E. Bailim Pissarra

Delegate to the ISSS: Prof^o Eng^o R. Pinto Ricardo

The new *address* of the Society will be as follows: Sociedade Portuguesa da Ciência do Solo, Instituto Superior de Agronomia, Tapada da Ajuda, 1399 Lisboa Codex, Portugal.

Persatuan Sains Tanah Malaysia

At the 8th Annual General Meeting of the Malaysian Society of Soil Science, held in March 1979, the following were elected Management Committee members for the period 1979/80:

President	:	Mr. Chew Poh Soon
Vice President (Peninsular Malaysia)	:	Mr. B. Gopinathan
Vice President (Sabah)	:	Mr. Kong Hon Hyen
Vice President (Sarawak)	:	Mr. Ahmad Haji Ebon
Hon. Secretary	:	Mr. Mr. Khoo Kay Thye
Hon. Asst. Secretary	:	Mr. Han Siew King
Hon. Treasurer	:	Mr. Chin Siew Lock
Immediate Past President	:	Dr. E. Pushparajah
Committee Members	:	Mr. Sharifuddin Haji Ab.Hamid; Mr. Jalaludin Jipelos; Mr. Yeow Kheng Hoe; Dr. Erh Koon Tee; Mr. Wong Chaw Bin; Mr. Zainal Eusof; Dr. S. Paramanathan; Mr. Tay Tian Hock.

The Society has now a permanent postal *address* and all future correspondence may be sent to: Hon. Secretary, Malaysian Society of Soil Science; P.O. Box 2644, Kuala Lumpur, Malaysia.

**INTERNATIONAL RELATIONS
RELATIONS INTERNATIONALES
INTERNATIONALE VERBINDUNGEN**

International Conference on Environmental Management of Agricultural Watersheds

The conference on Environmental Management of Agricultural Watersheds was convened by the International Institute for Applied System Analysis jointly with the National Committee for the International Hydrological Program of the Czechoslovak Academy of Sciences. It was held in the Castle 'Smolenice', the resthouse of the Slovakian Academy of Sciences, Smolnice, Czechoslovakia from 23rd to 27th April, 1979. The co-sponsoring Organizations of the meeting were as follows: the Ministry of Agriculture, Slovakian Socialist Republic, CSSR; the Committee for IIASA of the Czechoslovak Socialist Republic; the International Society of Soil Science; the International Association of Hydraulic Research; the International Water Research Association; the International Association of Hydrogeologists, and the International Society for Ecological Modeling.

The International Institute for Applied System Analysis (IIASA) is an international research institute founded in October, 1972 at the initiative of the academies of science or equivalent institutions in 12 countries, both East and West, in order to find approaches adequate to the challenge of the future. The IIASA is, in fact, the only international non-governmental interdisciplinary applied research institute in existence.

The conference was opened by Deputy Minister of Agriculture of the Slovakian Socialist Republic, Dr. Németh. The Director of IIASA, Dr. Levien, welcomed the conference participants and gave a short information on the aims and activity of the institute. The Conference was then addressed by the Czechoslovak I.H.P. Committee, ISSS, WMO and ICID.

At the opening meeting Prof. O. Vasiliev, Deputy Director of IIASA and leader of its Resources and Environment Section, delivered a brief lecture on the topics of the conference in relationship with the programme of the IIASA.

Professor G. Golubev (IIASA) presented a paper entitled 'System aspects of an environmental management for agricultural watersheds'. He underlined the significance of system analysis involving specific problems of watersheds.

The last paper of the opening session was presented by Prof. D. Pimental (USA) on 'Land use policies: Environmental degradation and energy resources'. The reporter called the attention to the hazard of degradation for the raw material and energy resources of the world.

In the afternoon of 23th April a session was held on the topic of 'Land use and its impact on water resources'. Six papers were presented followed by a long and active discussion.

The second topic of the meeting was 'Agricultural management practices and their impact on water resources'. In the framework of this session held in the morning, 24th April, five lectures were devoted to above problem. The discussion and debate following the lectures dealt mainly with the problems of man's effect on both water and soil.

Two meetings were devoted to the problem of 'Management of groundwaters for agricultural production' in the afternoon of 24th April and in the morning of 25th April. This part of the conference consisted of 15 papers that also aroused a discussion.

The sessions held Wednesday morning and afternoon were dealing with the question 'Environmental management of irrigated agriculture'. Ten lectures were delivered and discussed during the two sessions.

The last but one meeting of the conference took place on the afternoon of 26th April, dealing with the subject of 'Surface water quality under fertilizer and pesticide usage'. Nine lectures with discussions were involved.

The last section of the conference was devoted to discussing the problems of 'Environmental management of complex agricultural systems', followed by a general debate and closing of the conference.

On Wednesday afternoon a professional excursion was organized to Pezinok and Bratislava, for visiting a collective farm.

The Conference was a successful meeting in order to agree on a better understanding of the applicability of system analysis for solving the problems of the management of agricultural watersheds. It also was a good opportunity for exchanging views on the possibilities of the application of modern mathematical methods on water and soil sciences and related subjects. The organizers and hosts did their best to make the conference not only professionally valuable, but also pleasant and enjoyable.

I. Szabolcs, Budapest, Hungary

U.S.A. Soil Management Support Services Program

The Soil Conservation Service of USDA is the implementing agency for a new international program developed by the Agency for International Development. A 'Soil Management Support Services' project became operational in September of 1979. The project provides a centrally funded mechanism for technical assistance in the area of proper use and management of land resources. The project includes a technical assistance component and a Soil Taxonomy component. The technical assistance component provides for TDY (travel funds) assistance to developing countries and for A.I.D. (contractual) assistance on soil survey, land use planning, soil and water conservation and other aspects of soil management. The Soil Taxonomy component provides for a staff to coordinate revisions of Soil Taxonomy to make it more applicable to soils of tropical countries, thereby creating a means of transferring crop and soil management technology within and among tropical countries.

Dr. Klaus Flach, Assistant Administrator for Soil Survey, SCS is the principal investigator and Dr. Tejpal Gill, AID, is the project monitor for the program.

Address: Dr. K. Flach, USDA/SCS, P.O. Box 2890, Washington DC 20013, USA

International Soil Tillage Research Organization (ISTRO)

The 8th Conference of ISTRO, organized by its President, Prof. Dr. G. Kahnt, was held from 10-14 September 1979, at the University of Hohenheim, Fed. Rep. of Germany. 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 post-conference excursion to the experimental husbandry farm 'Ihingerhof' made it very clear that soil tillage is an integral part of the farming system.

The offset-printed A4-size Conference Proceedings (439 pages) may be ordered from Prof. Dr. G. Kahnt, University of Hohenheim, 05400 Institute of Crop Production, P.O. Box 106, 7000 Stuttgart 70, BRD, by sending a remittance of DM 30.00.

C. van Ouwkerk, Haren, The Netherlands

INTERNATIONAL TRAINING COURSES / COURS INTERNATIONALES DE FORMATION/INTERNATIONALE FORTBILDUNGSKURSE

Course on Water and Waste Engineering for Developing Countries, Loughborough, U.K. April-June 1980.

3-month course for senior engineers and scientists from developing countries. Course does not cover agricultural water management directly, but does include numerous topics related to irrigation. *Information:* J. Pickford, Department of Civil Engineering, University of Technology,

Information: J. Pickford, Department of Civil Engineering, University of Technology, Loughborough, Leicestershire LE11 3TU, U.K.

Post-graduate Courses in Aerial Photography and Remote Sensing Data in Earth Sciences, ITC, Enschede, The Netherlands.

1-year courses, starting in September/October or January each year in several fields of earth sciences, e.g. soil survey (soil erosion and soil conservation), geology, geography and geomorphology, forestry, vegetation survey and multi-disciplinary investigations for development planning. Possibility of follow-up to 1-1½ year M.Sc course. The courses may also be followed at the ITC daughter institutes in Bogotá, Colombia; Dehra Dur, India; Bandung, Indonesia and Ile-Ife, Nigeria.

Information: ITC Office of Student Affairs, P.O. Box 6, 7500 AA Enschede, The Netherlands.

International Courses at IAC, Wageningen, The Netherlands.

The 19th international course on Land Drainage is given from August 18–December 5, 1980, with the objective to provide the physical and agricultural backgrounds of drainage and to present the main aspects of design, construction and maintenance of field drainage systems. Other courses in 1980 at IAC are: 10th International Course on Applied Plant Breeding (March 18–June 27), 9th International Potato Course (April 8–July 11), 28th International Course on Rural Extension (June 29–July 26), 9th International Course on Plant Protection (July 28–November 7) and the 19th International Course on Vegetable Growing (August 12–November 14).

Information: The Director, International Agricultural Centre (IAC), P.O. Box 88, 6700 AB Wageningen, The Netherlands.

International Courses in Hydraulic Engineering, in Hydrology and in Environment Science and Technology, Delft, The Netherlands.

These courses are intended to promote the transfer of experience and know-how in the field of science and technology related to water and the environment to professionals, especially from developing countries. The 11-month study programme offers lectures, laboratory work, workshops, project work and field studies.

Information: The Registrar, Netherlands Universities Foundation for International Co-operation, P.O. Box 90734, 2509 LS The Hague, The Netherlands.

Advanced Course in Soil Science and Water Management, Wageningen, The Netherlands.

This 2-year course, leading to a M.Sc–degree, is designed for young B.Sc–graduates from developing countries and intends to provide an academic training directed towards subjects which are of direct importance for agricultural development. One of the following three programmes may be chosen: Land evaluation and agropedology; Soil fertility; Soil and plant analysis; Water management (irrigation, agrohydrology, drainage).

Information: Director of Studies of the M.Sc Course in Soil Science and Water Management, P.O. Box 37, 6700 AA Wageningen, The Netherlands.

Post-graduate Course in Integrated Study and Rational Use of Natural Resources, Paris / Montpellier / Toulouse, France, September 1980 – August 1981.

The course comprises the teaching of subject matters, which are indispensable for the carrying out of integrated studies such as statistics, climatology, hydrology, geomorphology, pedology, animal and plant ecology, human geography and sociology. The language of the course is French.

Information: Commission française pour l'Unesco, rue la Perouse, 75116 Paris, France.

Post-graduate Training Course in Soil Science, Ghent, Belgium.

This 2-year course, open for candidates mainly from developing countries, with a B.Sc, B.A. degree or comparable education, consists of an introductory part in the first year, and specialization in the second year with the following orientations: (1) soil genesis and classification; (2) soil physics and chemistry. Languages of the course are English and French.

Information: The International Training Centre for Post – Graduate Soil Scientists, 44, Rozier, B-9000 Ghent, Belgium.

Post-graduate Training Courses in Soil Science and Plant Biology, Granada / Sevilla, Spain.

This 7-month course, starting in January each year and open for non-european post graduate students, intends to provide the participants with an indepth knowledge in the cultivation of agricultural crops. Language of the course is Spanish.

Information: Dr. M. L. Garrido, Estacion Experimental del Zaidin, Avenida de Cervantes, Apdo. 419, Granada, Spain.

International Post-graduate Course in Natural Resources Research and Land Evaluation, Sheffield, United Kingdom.

This course, starting mid-September and with a duration of 12 months, provides instruction in modern methods and techniques of field and laboratory study in natural resources research. Land evaluation and development planning are the chief concern ultimately and training is organized to direct specialists to view their work in the context of environmental relationships.

Information: The Registrar, University of Sheffield, Sheffield S10 2TN, United Kingdom.

Cursos de Postgrado Desarrollo de Recursos de Aguas y Tierras, Merida, Venezuela.

The objective of the course, leading to a M.Sc. degree, is to train the participants in developing the land and water resources within the social economical and cultural conditions of Latin-America and the Caribbean. The following courses are given: 'Suelos y Riego', 'Riego y Drenaje', 'Ingenieria Hidráulica', 'Hidrología', 'Planificación de Recursos Hidráulicos'. The duration of the courses is six trimesters and the language Spanish.

Information: CIDIAT, Apartado 219, Merida, Venezuela.

Graduate and Post-graduate Courses on Soils and Related Sciences, Los Baños, Philippines.

The Southeast Asian Regional Centre for Graduate Study and Research in Agriculture (SEARCA) offers regular M.Sc. and Ph.D. degree courses and shortterm training programmes, a.o. in 'Soil and Water Management'.

Information: Dr. J. D. Drilon Jr., Director SEARCA, Los Baños, Laguna 3720, Philippines.

Courses in Agricultural Production and Technology for foreign agriculturists by the USDA and US universities, 1980.

Irrigation Problems and Practices (June 9–Aug. 1).

This 8-week course intends to train the participants in the agronomic and engineering aspects of irrigation water management.

Resource Development of Watershed Lands (June 16–July 25).

This 6-week course focusses on effective use and development of water, soil and human resources of watershed lands.

Soil Fertility Relationships Affecting Food Production (June 8–Aug. 15).

This 10-week course concentrates on the interrelationships among soil morphology, fertilizers and crop fertility requirements.

Information: Dr. R. I. Ayling, Deputy Director for International Training, USDA/OICD, Room 3529 – South Building, Washington, D.C. 20250, U.S.A.

Postgraduate Courses in Soil Science, University of Reading, Department of Soil Science, U.K.

M.Sc. Course in Soil Chemistry.

A one-year course intended primarily for graduates in science or applied science, covering the chemistry of soil constituents, soil processes and plant nutrition, and including extensive practical work in soil sampling and analysis, and in various aspects of soil fertility.

M.Sc. Course in Pedology and Soil Survey.

A one-year course based on the principles of pedology, with special emphasis on soil genesis and the conduct of soil surveys, and covering pedology, soil chemistry and physics, soil biology and the principles of crop production and soil management.

The courses start about 1st October.

Information: The Secretary, Department of Soil Science, University of Reading, London Road, Reading, Berkshire, RG1 5AQ, U.K.

Curso Internacional de Fertilidad de Suelos y Nutrición Vegetal, Madrid, Spain

The Course has the objective to train the participants in the problems of soil fertility and plant nutrition.

During the course the following subjects are given: The fertility of soils; The nutrition of plants; The soil-plant relation; Cultivation techniques; Production and use of fertilizers; Special crops.

Language of the course is Spanish and its duration five months.

Information: Secretaría del Curso Internacional de Fertilidad de Suelos y Nutrición Vegetal, Serrano, 115 bis, Madrid-6, Spain.

Forthcoming National and Regional FAO Training Courses.

Training course on the Application of Remote Sensing to Agricultural Resources; FAO/WMO/ESA Training Course on the Application of Remote Sensing Techniques to Agro-Climatology; Training Course on Azolla, Blue-Green Algae in Rice Cultivation; Training Course on Organic Recycling in Agriculture; Training Course on Management of Rice Soils; Training Course on Combatting Salinization; Training Course on Prognosis of Salt-Affected Soils, Training Course on Soil Conservation.

Training courses will be held in various countries. Details are not yet known.

Information: FAO, Land and Water Development Division, Viale Terme di Caracalla, Rome 00153, Italy.

M.Sc. Courses in Soil and Water Engineering and in Land Resource Management, Silsoe, U.K.

The course in Soil and Water Engineering is designed to meet the needs of civil engineers and agriculturists who are involved in agricultural development work, mainly overseas. The Course takes two years, but candidates with a good honours degree in a relevant subject may complete the course in one year.

The Course in Land Resource Management is designed to meet the needs of those working or intending to work in land resources and survey and evaluation, rural and agricultural planning, as planning or land use officers or in projects teams. The course has a duration of one year.

Both courses start in October each year and lead to a M.Sc. in Agricultural Engineering.

Information: The Careers and Recruitment Officer, National College of Agricultural Engineering, Silsoe, Bedford MK45 4DT, U.K.

Postgraduate Training Courses in Irrigation and Soil Conservation, Nairobi, Kenya.

The University of Nairobi offers annually four-term courses, leading to a Post-graduate Diploma in Irrigation/Soil Conservation. The courses include hydrology, plant-water relations, soil-water relations, water resources, survey, irrigation technology, soil erosion, soil conservation, land reclamation, drainage, economics of irrigated agriculture and land use planning.

Information: Dr. J. W. Kijne, Chairman, Department of Agricultural Engineering, University of Nairobi, Box 30197, Nairobi, Kenya.

International Courses on Sand Dune Fixation, Management of Irrigated Land and Arid Pastures, Moscow/Ashkhabad, U.S.S.R.

These courses, organized in cooperation with the United Nations Environment Programme (UNEP), are intended to train experts and technicians from developing countries in the field of various sand dune fixation techniques and in management and use of arid lands.

Information: The Division of Environmental Management, United Nations Environment Programme, P.O. Box 30552, Nairobi, Kenya.

International Course on Land and Water Development, Cairo, Egypt.

This 5-month course is designed to cover the theoretical and practical aspects of land and water development with a wide range of subjects, such as fundamentals of soil science, land reclamation, planning and execution, irrigation principles and development, etc.

Information: The Director, The Foreign Agricultural Relations Department, Ministry of Agriculture, Dokki, Cairo, Egypt.

Cours de D.E.A. Fédéral en Pédologie et Aménagement des Sols, Paris, France.

Le cours annuel D.E.A. de Pédologie et Aménagement des Sols est destiné à former des étudiants, en Pédologie Générale ou en Pédologie Tropicale, et dans les domaines de la Recherche ou bien de l'Application. Il vise à les entraîner à l'analyse des formations pédologiques aux différents échelles, à l'étude des processus et des mécanismes de la pédogenèse appuyés sur les méthodes modernes de la chimie et de la minéralogie, au diagnostic du comportement des sols en vue de leur utilisation et de leur aménagement.

Information: Institut National Agronomique, 16, rue Claude Bernard, 75005 Paris, France.

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

1980

FAO/SIDA Workshop on Organic Material as Fertilizers, Coast Rica, 7-18 January 1980.

Information: Mr. D. Arens, FAO, Viale delle Terme di Caracalla, 00153 Rome, Italy.

Scientific manifestation of the 'Commissio Internationale de Genie Rural (CIGR). General theme: 'Evolution of research in agricultural engineering'. 12-15th February 1980, Brussels, Belgium.

Information: Prof. P. F. J. Abeels, Département de Génie Rural, Faculté des Sciences Agronomiques, Université Catholique de Louvain, place Croix du Sud 3, B-1348 Louvain-La-Neuve, Belgium.

Symposium on Principles and Practices for Reclamation and Management of Salt-affected Soils, Karnal, Haryana, India, 18-21 February 1980 (ISSS Subcommission A).

Information: Dr. J. S. P. Yadav, Central Soil Salinity Research Institute, Karnal - 132001, Haryana, India.

20e Conference des organisations internationales pour l'étude en commun des plans d'activité dans la domaine de l'agriculture en Europe, Paris, France, 25-29 February 1980.

Information: Mle. B. M. Jennings, FAO Office - Bocage 12, Palais des Nations, CH 1211 Geneva 10, Switzerland.

International Symposium on the Application of Recent Developments in Hydrological Forecasting to the Operation of Water Resource Systems, 14-18th April 1980, Oxford, England (sponsored by IASH, co-sponsored by WMO and Unesco).

Information: Institute of Hydrology, Wallingford, Oxon, U.K.

14th International Symposium on Remote Sensing of Environment, San José, Costa Rica, April 1980.

Information: Dr. Jerald J. Cook, Environment Research Institute of Michigan, P.O. Box 8618, Ann Arbor, Michigan 48107, U.S.A.

5th International Congress on Soilless Culture, Wageningen, Netherlands, 18-24 May 1980.

Information: Secretariat ISOSC, P.O. Box 52, 6700 AB Wageningen, The Netherlands.

National Soils Conference, Australian Society of Soil Science Incorporated, Sydney, Australia, 19-23 May 1980.

Information: Conference Secretary, Sydney Science Centre, 35-43 Clarence Str. Sydney, N.S.W. 2000, Australia.

Symposium on Machine Processing of Remotely Sensed Data in conjunction with International Symposium on Soil Information and Remote Sensing, Lafayette, U.S.A., 2-6 June 1980 (ISSS Working Groups RS and DP, with Purdue University Laboratory for Applications of Remote Sensing).

Information: Dr. M. Baumgardner, LARS, Purdue University, 1220 Potter Drive, West Lafayette, IN 47906, U.S.A.

Fifth Symposium on Engineering Applications of Mechanics, Ottawa 16-17 June 1980.

Information: K. Charbonneau, Exec. Sec. Fifth Symposium on Engineering Applications of Mechanics, c/o National Research Council of Canada, Ottawa, Ontario, K1A 0R6 Canada.

Study Conference on Land Surface Processes in Climate Models (ICSU, WMO, JOC), Greenbelt, U.S.A., June 1980.

Information: W. G. Baker, 51 Bd de Montmorency, F-75016, Paris, France.

7th Latino-American Soil Science Congress, San José, Costa Rica, 30 June–4 July 1980.

Information: Dr. Alfredo Alvarado, Apartado 281, San José, Costa Rica.

26th International Geological Congress, Paris, 7-17 July, at the Centre International de Paris, Palais des Congrès.

Information: Secretariat, 26th International Geological Congress, Maison de la Géologie, 77-79 rue Claude Bernerd, 75775-Paris, France.

International Conference on Soil Conservation, Silsoe, U.K., 21-25 July 1980.

Information: Dr. R. P. C. Morgan, National College of Agricultural Engineering, Silsoe, Bedford, MK45 4DT, U.K.

Biology and Management of Mangrove and Tropical Shallow Water Communities, Port Moresby, Madang, Papua New Guinea, 20 July–2 August 1980.

Information: Prof. D. J. Montgomery, Western Society of Naturalists, Biological Sciences Dept., California Polytechnical State University, San Luis Obispo, Ca 93407, U.S.A.

2nd World Congress for Rural Sociology: Agrarian problems, peasants and development, Mexico City, Mexico, 7-12 August 1980.

Information: R. Stavenhagen, El Colegio de Mexico, Apds., 20-671, Mexico 20, D.F. Mexico, Mexico.

International Conference on Biological Agriculture, Ashford, U.K., 26-30 August 1980.

Information: Dr. R. D. Hodges, Wye College, Wye Ashford, Kent, TN25 5AH, England.

24th International Geographical Congress, 1-5th September 1980, Tokyo, Japan.

Information: International Geographic Union, Geographisches Institut, Universität Freiburg, 78 Freiburg, Federal Republic of Germany.

Second International Symposium on Microbial Ecology, Warwick, U.K., 7-12 September 1980 (ISSS Commission III).

Information: Dr. M. Fletcher, Dept. of Environmental Sciences, University of Warwick, Coventry CV4 7AL, U.K.

Fourth European Clay Conference, Munich, Federal Republic of Germany, 8-10 September 1980 (Participation of ISSS Commission VII).

Information: Dr. U. Schwertmann, Institut für Bodenkunde, 8050 Freising-Weißenstephan, Federal Republic of Germany.

International Symposium on Land Evaluation for Forestry Purposes, Wageningen, The Netherlands, October 1980.

Information: Dr. K. J. Beek, ILRI, P.O. Box 45, Wageningen, The Netherlands.

Symposium on Paddy Soils: Properties, Classification and Management, Nanjing, People's Republic of China, 19-24 October 1980.

Information: Prof. Ching-kwei-Li, Nanking Institute of Soil Science, Academia Sinica, P.O. Box 821, Nanking, People's Republic of China.

First OAU Inter-African Soil Science Congress, Accra/Kumasi, Ghana, 5-10 November 1980 (earlier set for 12-16 November 1979).

Information: Dr. H. Obeng, Soil Research Institute, Academy Post Office, Kwadaso-Kumasi, Ghana.

First International Conference on Technology for Development, Canberra, Australia, 24-28 November 1980.

Information: The Conference Manager, First International Conference on Technology for Development, The Institution of Engineers, Australia, 11 National Circuit, Barton, ACT 2600 Australia.

International Symposium on the Management of Nitrogen in Relation to Crop Production, and the Environmental Impact of Fertilizer Usage, Vienna.

Information: Dr. F. W. P. Winteringham, IAEA, P.O. Box 590, A-1011 Vienna, Austria.

Symposium on Soil Problems associated with irrigation in Arid Steppe and Savanne, Ghana or USSR (ISSS Commission VI).

Information: Dr. E. Egorov/Prof. V. Kovda, Dokuchaev Soil Institute, Pyjevski 7, Moscow 17, U.S.S.R.

Symposium on the Soils of the Humid Tropics and their Management, Ghana (ISSS Commissions IV, V and VI).

Information: Dr. H. Obeng, Soil Research Institute, Kwadaso-Kumasi, Ghana.

International Congress on Arid and Semi-arid Zones, La Serena, Chile, 15-19 January.

Information: Servicio de Desarrollo Científico, Artístico y de Cooperación Internacional, Diagonal Paraguay 265, Torre 15, Piso 17, Oficina 1703, Santiago, Chile.

Fourth International Conference on Expansive Soils, Denver, U.S.A. 16-18 June 1980.

Information: Dr. Donald R. Sneath, U.S. Army Engineers Waterways Experimental Station, ATTN: WESCE, P.O. Box 631, Vicksburg, MS 39180, U.S.A.

Symposium on Management of Clay Soils in the Tropics, Trinidad, West Indies, 14-23 September 1980.

1981

Second International Symposium on 'Acid Sulphate Soils', 12-17th January 1981. Bangkok, Thailand.

Information: S. Panichapongs, Secretary Second International Symposium on Acid Sulphate Soils, Department of Land Development, Bangkok, Bangkok 9, Thailand.

Soils with Variable Charge, joint meeting of Commissions IV, V and VI of the ISSS, Massey University, Palmerston North, New Zealand, 11-18 February 1981. Under the auspices of the N.Z. Society of Soil Science and the Royal Society of N.Z.

Information: Secretary-General, Soils with Variable Charge Meeting, Soils Bureau, DSIR, Private Bag, Lower Hutt, New Zealand.

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.

Workshop on Methodology for Spectral Analyses of Soils, Warsaw, Poland, 4-8 May 1981 (ISSS Working Group RS, in cooperation with Polytechnical Institute of Warsaw).

Information: Dr. M. S. Bialousz, Ul. Belska, 24 M24, 02.638, Warsaw, Poland.

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 N1G 2W1, Canada.

International Working Meeting on Soil Micromorphology, London, United Kingdom, 17-21 August 1981 (ISSS Subcommission B).

Information: Dr. P. Bullock, Rothamsted Experimental Station, Harpenden, Herts. AL5 27Q, U.K.

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

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

7th International Clay Conference, Bologna and Pavia, 6-12 September 1981.

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

Workshop on Soil Data Processing, France (ISSS Working Group DP).

Information: Dr. J. Schelling, Netherlands Soil Survey Institute, P.O. Box 98, Wageningen, The Netherlands.

1982

12th International Congress of Soil Science: Managing Soil Resources to Meet Challenge of Mankind, New Delhi India, 8-16 February 1982 (sponsored by Indian Society of Soil Science and Indian Council of Agricultural Research).

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

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

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

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

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.

1984

12th International Congress on Irrigation and Drainage, Fort Collins, Denver, Colorado, USA.

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

CANCELLED:

International Symposium on Isotope and Radiation Techniques in Studies of Soils Physics and Irrigation in Relation to Crop Production, Vienna, Austria, 21-25 April 1980.

Information: Mr. Y. Barrada, Joint FAO/IAEA Division of Atomic Energy in Food and Agriculture, International Atomic Energy Agency, P.O. Box 590, Kärnter Ring 11, A-1011 Vienna, Austria.

NEW PUBLICATIONS*
NOUVELLES PUBLICATIONS*
NEUE VERÖFFENTLICHUNGEN*

Principles of Plant Nutrition, by K. Mengel and E. A. Kirkby, 1978. International Potash Institute Berne, Switzerland. 593 p.

The scope of plant nutrition always considerably depends on the personal approach of the scientists involved. This new textbook represents a synthesis between crop physiology and soil science, with a special emphasis on biochemistry. Half of the text is devoted to general subjects and offers an introduction to plant nutrients, the physics and the chemistry of the soil with special reference to the availability of nutrients for plants, nutrient uptake and assimilation, plant-water relations, nutrients and plant growth and fertilizer application. The second half of the book discusses the main nutrients and trace elements treating each element separately with respect to soil relations, physiological functions, and its role in crop production. In addition elements of minor importance and elements with more toxic effects are surveyed.

The book has been designed as a textbook for students. It will, however, serve also as a useful book of reference. More than 1500 citations from all over the world are listed and most of the relevant contributions to the field of plant nutrition are adequately considered. The broad scope of the authors as well as the high scientific standard and the reasonable price will certainly meet the purpose of the book and lead to its widespread use at agricultural universities and institutions.

Price: Swiss Francs 38.—/US-\$ 22.35 plus mailing charges

Orders to: International Potash Institute, CH-3048 Worblaufen-Bern/Switzerland. P.O. Box 41.

G. R. F. Findenegg, Wageningen, the Netherlands.

Data handbook for clay materials and other non-metallic minerals, edited by H. van Olphen and J. J. Fripiat under auspices of the OECD and Clay Minerals Society, 1979, 360 p. ISBN 0-08-022850-X.

This book comprises a large collection of chemical, physical and mineralogical data obtained on reference samples of selected typical clay materials and some major non-metallic minerals such as gibbsite, calcite, magnesite and gypsum. The data were collected throughout the world as part of two independent projects under the auspices of the OECD and the Clay Minerals Society of the U.S.A. Samples of the materials to which the data apply are available. The aim of both projects and this book is to provide those involved in clay research and its industrial applications with sets of authoritative data describing the properties of the available reference materials. The presentation of the data for each property is accompanied by a discussion of methodology together with a comparison of the features of alternative methods. Often advice is provided on method selection and on experimental details (although not described as in a laboratory manual) and reference is made to the appropriate literature.

The book is divided in two parts. In Part 1 the data are summarized and presented by sample whereas in Part 2 the data are presented arranged by the property measured. The analytical methods used include: chemical analysis, dissolution methods, X-ray diffraction, CEC, surface area, electron microscopy and diffraction, thermal analysis, infrared spectroscopy and, to limited extent, electron spin resonance.

Price: £ 30.00 or \$ 60.00

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

Modelling of Soil Salinization and Alkalinization. V. A. Kovda and I. Szabolcs, editors. *Agrokemia es Talajtan (Agrochemistry and Soil Science)*, Vol. 28, 1979. Supplement. 208 p.

This supplement to the well-known journal contains newly developed simulation models for the study of some of the main aspects and processes of soil salinization and alkalinization. It was the intention of the authors to describe and analyse the dominating processes of interaction between electrolyte solutions and soils under conditions similar to natural soil and irrigation conditions. Contents: soil salinization and alkalinization processes, soil-water relationships in saline and alkali conditions, chemical and physico-chemical aspects of soil salinization and alkalinization processes, mathematical models of soil salinization and alkalinization processes, the description of ion transport in soil columns, and computer programmes. A limited number of copies is still available, and can be requested, preferably on exchange basis, by writing to: Research Institute for Soil Science and Agricultural Chemistry, Hermann Otto Ut 15, H-1525 Budapest, Hungary.

*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 bookstore or directly with the publishers.

*Les titres de nouvelles publications sont mentionnés à titre d'information. Le Secrétariat de l'AISS ne peut pas se charger de commandes; celles-ci doivent 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.

Soil Chemistry. Part B. Physico-Chemical Models. G. H. Bolt, editor. Developments in Soil Science 5B. Elsevier, 1979 xxii + 474 p. ISBN 0-444-41668-4.

This volume elaborates on many of the topics introduced in Part A but can also be used as a self-contained work. Written primarily for professional soil scientists, it deals with theoretical developments in this field. These are given extensive coverage and include derivations exposing assumptions and approximations, allowing for a critical evaluation of the models involved. The depth of coverage adds to the book's value as a source of reference and makes it a suitable text for graduate and higher-level study. The topics treated are: the diffuse double layer; thermodynamics of cations exchange; theories of cation adsorption by soil constituents; experimental information on cation exchange in soil systems; cation exchange in clay minerals; anion exclusion in soil; interactions of orthophosphate ions with soil; movement of solutes in soil; electrochemical phenomena in soil and clay systems; aspects of equilibrium and kinetics of clay formations.

Price: Dfl. 150.00

Orders to: Elsevier Scientific Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands. For USA and Canada: Elsevier North-Holland, 52 Vanderbilt Avenue, New York, NY 10017, U.S.A.

Proceedings Third International Conference on Permafrost.

The Proceedings of the Third International Conference on Permafrost are in two volumes. Volume 1 contains 139 papers submitted by permafrost scientists and engineers from 11 countries - Argentina, Canada, Denmark, France, German Federal Republic, Japan, Poland, Sweden, Switzerland, U.S.A., and U.S.S.R. Volume 2 contains 8 review papers on special permafrost topics, general information, list of participants, written discussions and the formal motions of the Conference.

Price: \$ 35.— (Vols. 1 & 2), postfree.

Orders to: Third International Conference on Permafrost, c/o National Research Council of Canada, Ottawa, Ont. K1A OR6, Canada.

Comptes rendus de la troisième conférence internationale sur le pergélisol.

Le compte rendu de la troisième conférence internationale sur le pergélisol comporte deux volumes. Le volume 1 contient 139 mémoires présentés par des chercheurs et des ingénieurs spécialisés dans l'étude du pergélisol et provenant de onze pays: l'Argentine, le Canada, Le Danemark, Les E.-U., La France, Le Japon, La Pologne, La R.F.A., La Suède, La Suisse et l'U.R.S.S. Le Volume 2 contient huit rétrospectives préparées par des experts en pergélisol, et d'autres matières de la conférence.

Prix: \$ 35.— (Vols. 1 et 2)

Commandes: Troisième conférence internationale sur le pergélisol, a/s du Conseil national de recherches du Canada, Ottawa, Ont. K1A OR6, Canada.

Pasture Production in Acid Soils of the Tropics. P. A. Sanchez and L. E. Tergas, editors. CIAT, Cali, 1979, 488 p.

This book consists of 30 papers which were presented at a seminar held at the Centro Internacional de Agricultura Tropical, Cali, Colombia, 17-21 April 1978, and one paper which summarizes the conclusions reached.

Tropical Latin America is the continent with the largest possibilities of expanding its agricultural frontier into its vast hinterlands of 850 million hectares of tropical savannas and humid forests. Many of these regions are rapidly being settled, but progress is limited by the low native fertility of the main soils classified as Oxisols or Ultisols and poor infrastructure. Under these conditions beef production is usually the most effective initial activity but is largely limited by forage availability during part or all of the year. The purpose of the seminar was to review the present state of knowledge on the production, management and utilization of forages under acid infertile soil conditions in the tropics, with emphasis in Latin America, but taking advantage of relevant experiences gained in other parts of the world.

Price: \$ 7.50 plus postage and packing.

Orders to: Centro Internacional de Agricultura Tropical, Apartado Aéreo 67-13, Cali, Colombia.

Agricultural Chemicals and Pesticides, a Handbook of the Toxic Effects. E. J. Fairchild. Castle House Publications, Tunbridge Wells, 1978, 229 p. ISBN 0-7194-0002-3.

This book presents a listing of the toxicity data for some 2190 chemicals which are used for agricultural or veterinary purposes. The data has been extracted from the U.S. National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances. It is published for the U.S. Department of Health, Education and Welfare.

The entry for each substance contains the definitive description of the substance, synonyms, toxic dose information with references, and references to existing and recommended standards.

This handbook should not only help with the provision of a safe working environment for those who use or are exposed to these substances, but also to those concerned with the toxic effects on non-human species.

Price: £ 20 plus £ 1 for postage and packing

Orders to: Castle House Publications, Castle House, 27 London Road, Tunbridge Wells, TN1 1BX, England.

Geography and Soil Properties. A. F. Pitty. Methuen & Co, London, 1979, 287 p.

This comprehensive introduction to the properties of soils is written for students in geography. After a chapter on the relation of geography and soils, the book covers the mineral and organic parts of the soil, soil structure and porosity, and the physical and chemical properties of the soil. An interesting chapter on soil mechanical properties, not normally found in this kind of books, is followed by some pages on the colour of the soil. The book contains a large bibliography and is illustrated with many graphs and tables.

Prices: paperback, ISBN 0-416-71540-0: £ 5.50; hardbound, ISBN 0-416-75380-9: £ 10

Both prices are exclusive of postage and packing.

Orders to: Methuen & Co. Ltd., North Way, Andover, Hampshire SP10 5BE, England

Rice: Soil, Water, Land. F. R. Moormann and N. van Breemen. International Rice Research Institute, Los Baños, 1978, 185 p.

This book gives an introduction to the relationships between the rice crop and its environment. Chapters giving attention to the physiography and geomorphology of the major rice-growing areas and the paramount importance of water in successful rice growing is followed by one with the classification of soils on which rice is grown in terms of Soil Taxonomy and the legend of the FAO-Unesco Soil Map of the World. Then the important effects of an aquatic water regime on soil properties and to temporary and permanent changes which occur in soils subjected to such a regime are discussed. A chapter is devoted to certain parameters pertaining to soils, water, and other characteristics of the environment as they relate to the growth and performance of the rice crop. In the last chapter the authors indicate relationships between the performance of rice cultivars and the properties of the environments.

The book contains many graphs, tables, black and white and colour photographs, and about 120 references. The price is low.

Prices: \$ 6.30 for developed nations and \$ 2.50 for developing nations. \$ 0.20 extra for surface mail and \$ 2.30 for airmail charges. Pre-payment required; Unesco coupons gladly accepted

Orders to: Office of Information Services, IRRI, P.O. Box 933, Manila, Philippines.

The Chemistry of Soil Constituents. D. J. Greenland and M. H. B. Hayes, editors. John Wiley & Sons, Chichester and New York, 1978, 469 p. ISBN 0-471-99619-X.

In this book a short historical outline of the development of soil science is given, touching briefly on soil formation, soil physics and soil biology. It gives in this first chapter an introduction to soil forming processes, the soil classification system Soil Taxonomy and the soil units of the legend of the FAO-Unesco Soil Map of the World.

The following two chapters deal with the inorganic and organic components of soils respectively. The chemical structures of the major inorganic components are now reasonably well known, but this is not true of the organic materials in soils. The relevant chapter presents an account of what has been experimentally established regarding the constitution of the particularly intractable complex of organic compounds found in soils. The final three chapters are concerned with the nature and extent of the surfaces of soil colloids, the electrical characteristics, and the ways in which ions and water are held and arranged at the surfaces.

This book and a forthcoming one on *The Chemistry of Soil Processes*, are intended both for students of environmental chemistry and soil science, and for the wide range of research and other scientists who are interested in the chemistry of soil.

Price: £ 26.00 or \$ 71.50, plus postage and packing

Orders to: John Wiley & Sons, Baffins Lane, Chichester, Sussex PO19 1UD, England or John Wiley & Sons, 605 Thord Avenue, New York, NY 10016, U.S.A.

Soil Physical Properties and Crop Production in the Tropics. R. Lal and D. J. Greenland, editors. John Wiley & Sons, Chichester and New York, 1979, 551 p. ISBN 0-471-99757-9.

This book contains 43 papers originally presented at a conference held at the International Institute of Tropical Agriculture, Ibadan, Nigeria, in December 1977 and is followed by a postscript of the Editors and a list of recommendations. The purpose of the book is to bring together information on the physical properties of soils and their effect on crop production in tropical regions. Specific physical problems identified include the deleterious effects of high soil temperatures, the dramatic reductions in plant growth caused by even short periods of waterlogging, and the ease with which cultivations can produce pans and inhibit root development, and consequently increase the likelihood that the crop will suffer from drought.

Papers are arranged under the following headings: physical properties of tropical soils, soil structure, soil-water relations, plant-water relations, soil temperature and crop production, root growth, soil physical properties and land use, and soil and water conservation. Most papers have an extensive list of references.

In the Foreword, Sir Charles Pereira, F.R.S., indicates that the total effort in terms of staff and resources devoted to these aspects of tropical agriculture are – still – inadequate to the scale of the problems. It is hoped that the present book may encourage scientists to tackle the research priorities mentioned.

Price: (UK) £ 29.50, plus postage and packing.

Orders to: see above.

The Use and Significance of Pesticides in the Environment. F. L. McEwen and G. R. Stephenson. Wiley-Interscience, Chichester and New York, 1979, 538 p. ISBN 0-471-03903-9.

The enormous increase in the use of pesticides during the past thirty years has fueled a major controversy. Proponents argue that their use is necessary to provide an adequate food supply and protect human health. Opponents dispute this contention and claim severe damage is being done to our environment, with adverse effects on fish, wildlife, and, most worrisome, human health.

This book provides an overall treatment of the subject from an unbiased point of view. It contains a rational assessment of the benefits and risks of pesticides; the reasons for their use in terms of perceived and demonstrable benefits; the nature of the chemicals involved (including illustrations and descriptions on the mode of action of major compounds) and their potential good or harm; the penetration of pesticides into the environment and their continued presence; the effects of such pesticides on target and nontarget organisms; and the legislative controls on pesticide use. For the first time, all this information is condensed into a single text which provides the scientific base needed to evaluate the pros and cons of pesticides, at a level that can be readily understood. Extensive data tables and an excellent bibliography contribute to making this book valuable to research scientists, professors, and students as a comprehensive treatment of a complex and controversial subject.

Price: (UK) £ 16.75 plus postage and packing

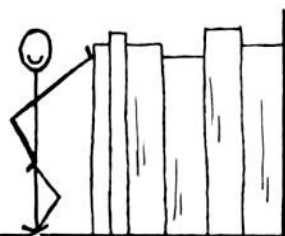
Orders to: John Wiley & Sons, Baffins Lane, Chichester, Sussex PO19 1UD, England or John Wiley & Sons, 605 Third Avenue, New York, NY 10016, U.S.A.

Atlas Photographique des Mineraux d'Alluvions-Photographic Atlas of Detrital Minerals. Mémoire du Bureau de Recherches Géologiques et Minières No. 95. P. Devismes. BRGM, Orleans, 1978 203 p. ISSN 0071-8246.

This atlas with texts in French and English contains 641 colour photographs of 173 alluvial mineral species and 8 black-and-white photographs illustrating the concentrate processing method. The minerals represent an almost complete range of the varieties to be found during alluvial prospecting on all continents. The varieties of minerals were selected from about 300,000 samples processed by BRGM.

Price: FF 400.00

Orders to: Departement Promotion et Vente, BRGM, B. P. 6009. 45018 Orleans Cedex, France.



Cycling of Mineral Nutrients in Agricultural Ecosystems, M. J. Frissel, editor. Reprinted from the journal *Agro-Ecosystems*, vol. 4, no. 1/2. Elsevier, 1978, 352 p. ISBN 0-444-41660-9.

This book results from the first international symposium of the Royal Netherlands Land Development Society, co-sponsored by the International Association for Ecology and Elsevier Scientific Publishing Company, held in Amsterdam. The book is a departure from the usual symposium proceedings, i.e. a collection of presented papers. It consists of an integrated manuscript compiled by the Editor from a number of individual contributions submitted prior to the symposium. This integrated text was discussed at the symposium and additional information, relevant remarks etc. arising from the discussions were later incorporated by the Editor into the final text.

The three main topics are: firstly, a discussion of the theory of nutrient cycling, together with clearly defined and well described flow-charts of nutrient transfers between plant pools, animal pools and soil pools (the latter split into immediately available nutrients, nutrients in soil organic matter and nutrients in soil minerals). Secondly, nutrient balances of 65 ecosystems; areas considered are Northwestern and Central Europe, Israel, Japan, U.S.A. and South America. Thirdly, summarizing tables and graphs of the different inputs and outputs of N, P and K of the 65 systems.

The book provides a worldwide survey of the current state-of-affairs in this field, indicating not only what is known but, more important, what is not known and hence to which areas future research should be directed.

Price: Dfl. 95.00

Orders to: Elsevier Science Division, P.O. Box 211, 1000 AE Amsterdam, The Netherlands.

Précis de Mineralogie. G. Aubert, C. Guillemin et R. Pierrot. Masson et BRGM, 1978, 384 pages, 64 photos couleur, 60 photos noir et blanc, 98 figures.

Depuis la parution en 1898 du *Précis de Minéralogie d'A.* de Lapparent, aucun ouvrage de ce type n'avait vu le jour en France. Les auteurs de ce nouveau 'précis' ont été, à des titres divers, des chercheurs, des enseignants, des rénovateurs ou conservateurs de collections, des responsables des orientations et du devenir de la minéralogie française. Ils ont résumé dans cet ouvrage, les connaissances et les acquis de plus de vingt années de vie professionnelle consacrée à la minéralogie.

Ce précis expose brièvement toutes les choses essentielles de la minéralogie: des notions de cristallographie aux moyens pratiques de détermination des espèces, chaque chapitre traite, le plus clairement possible, de tout ce qui peut être utile à l'étudiant, au géologue ou à l'amateur éclairé.

Certains chapitres, que l'on trouve rarement développés dans les manuels modernes, sont ici particulièrement importants: cristallographie géométrique, calcul des formules chimiques, technique de mesure de la densité, moyens immédiats de détermination. . .

On trouvera également dans ce Précis d'assez nombreux chapitres consacrés à des disciplines voisines, voire soeurs, dont les limites avec la minéralogie proprement dite sont plutôt des lignes étroites que des frontières. C'est ainsi que l'on trouvera des éléments de géochimie, de pétrographie, de géologie, de gemmologie, d'économie minière. . . Plus de la moitié de l'ouvrage est cependant consacrée à la description des minéraux. Plus de 600 espèces minérales (sans compter quelques variétés) sont signalées; ceci représente en volume et en poids plus de 99,9% des minéraux constituant la croûte terrestre. Une abondante illustration en noir et blanc et en couleurs complète agréablement cet ouvrage.

C'est donc un ouvrage complet, un manuel, qui trouvera sa place bien auprès de l'amateur que de l'étudiant ou du professionnel désireux de rafraîchir ses connaissances.

Prix: FF 160.00

Commandes: Bureau de Recherches Géologiques et Minières, B.P. 6009, 45018 Orléans Cedex, France.

Major Soils and Soil Regions in the Netherlands. H. de Bakker. Dr. W. Junk Publishers, The Hague (ISBN 90-6193-590-3) and Pudoc, Wageningen (ISBN 90-220-0675-1), 1979, 192 p.

The book in Dutch: 'De Nederlandse Bodem in Kleur' by H. de Bakker and A. W. Edelman-Vlam, published in 1976, was primarily written for persons acquainted with the geography and history of the Netherlands. The need for an English edition was felt, because 'Soils of the Netherlands' by C. H. Edelman dates back to 1950.

The present book not only includes the 32 page-sized colour plates of soil profiles which are contained in the Dutch book, but also a chapter on the environment, descriptions of seven major soil regions. These descriptions include data on geology, geomorphology, soil pattern and settlement pattern, reclamation history, etc. Each soil plate is accompanied by general data, a profile description and the analytical data. All soils are placed in 10 taxonomies, which make it a valuable basis for comparison of Dutch soils with those in other parts of the world.

The book is very well illustrated, the colour plates are of high quality.

Price: Dfl. 100.00, plus postage

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

Soil erosion. R. P. C. Morgan. Topics in Applied Geography, Longman 1979, 113 p. ISBN 0-582-48692-0.

This book is published in the new Longman series Topics in Applied Geography. The first part covers the mechanics of wind and water erosion, the processes of erosion, the assessment of erosion hazard, modelling of erosion in the field and laboratory and the value for predicting rates of erosion loss, and the control of erosion by different methods of management. Emphasis is placed on the extent and deficiencies in current knowledge.

In the second part these themes are ably integrated in three case studies in Peninsular Malaysia at reconnaissance, semi-detailed and detailed scales, made for different purposes. Implications for land use and a conservation strategy are given. The book is intended for students studying soil erosion and conservation, but it is also a useful, clear introduction for those concerned with activities influencing these topics, which become increasingly of concern, also in temperate regions.

Price: £ 3.95, net price in U.K.

Orders to: Longman Group Ltd, Longman House, Burnt Mill, Harlow, Essex CM20 2JE, U.K.

Remote Sensing in Geomorphology. H. Th. Verstappen. Elsevier, 1977, 214 p. ISBN 0-444-41086-4.

Dealing with the applications of remote sensing technology to the study of landforms, including both their genetic and environmental aspects, this book opens with a review of the development of the technology from the early days of balloons and kites up to the space age. Emphasis is placed on the principles and methodology of image interpretation, specifically of geomorphological phenomena such as landforms and land-forming processes. As the easy detectability and analysis of landforms from the air makes them an invaluable clue for image interpretation which is geared to many scientific disciplines, this book will be of interest to a wide range of readers.

Price: Dfl. 98.—

Orders to: Elsevier Scientific Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands.

Physical Methods in Determinative Mineralogy. Second edition. J. Zussman, editor, Academic Press, London and New York, 1977, 720 p. ISBN 0-12-782960-1.

This is a greatly revised edition of Professor Zussman's outstandingly successful work, first published in 1967. It describes the three principal physical methods that can be used to determine the nature of the mineral constituents of rocks. The first uses the precise measurement of a physical property (e.g. density, hardness, refractive index), the second records a characteristic electromagnetic spectrum (e.g. infra-red, X-ray fluorescence), and the third uses a characteristic diffraction pattern (e.g. X-ray or electron diffraction). Methods such as these, and others for which many laboratories are, or can reasonably be equipped, are dealt with in this book. There is also a chapter on mineral separation.

The aim of each author is to give the reader an appreciation of the theory, procedures, scope and limitations of the method concerned and also some examples of applications and a guide to the literature. The revised edition includes a discussion of neutron activation analysis and of a relatively new and developing technique, that of automatic image analysis. All but one of the methods dealt with previously appear again, and two of them have been reviewed afresh by new contributors.

The physical methods described are applicable not only to rocks and minerals but also to such materials as ceramics, refractories, glass and cements.

Primarily a research work, this book will be of interest to mineralogists, geologists, geophysicists, geochemists, and others concerned with the analysis of materials, and will be a necessary addition to university and institute libraries.

Price: £ 23.50 or \$ 45.90

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

Soil Disinfestation. Developments in Agricultural and Managed-Forest Ecology Volume 6. D. Mulder, editor. Elsevier, Amsterdam, 1978, 368 p. ISBN 0-444-41692-7.

This book is a multi-author work providing a review of the various methods of soil disinfestation (physical, chemical and biological) which are currently practiced. Attention is also given to the possible pollution and health hazards of soil disinfestants by consideration of their fate – after use – in the soil.

The book should be of interest to plant pathologists, agriculturists, soil scientists and all those concerned with the problem of soil-borne pest and diseases.

Price: Dfl. 190.00

Orders to: Elsevier Scientific Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands, or Elsevier North-Holland, 52 Vanderbilt Avenue, New York, NY 10017, U.S.A.

Bentonites; Geology, Mineralogy, Properties and Uses. R. E. Grim and N. Güven. Developments in Sedimentology 24. Elsevier, 1978, 256 p. ISBN 0-444-41613-7.

This book in the Developments in Sedimentology series is the first to be entirely devoted to bentonites – a group of clay minerals with properties which are peculiar and interesting both from a scientific and an industrial point of view. The work is based on the now well-established definition of bentonite as being a clay composed predominantly of the mineral smectite, whose properties are determined by this smectite dominance.

Over the past 30 years, Professor Grim has amassed an impressive and unique collection of bentonite samples from all over the world. These have been studied, by the authors, both in the field and in the laboratory and the results integrated to form this monograph which concentrates on three important aspects of the subject. Firstly, the mode of occurrence and geological origin of bentonites is described. Secondly, the variations in their mineral and chemical composition are examined, and the techniques and applications of the electron-optical methods employed are explained. Thirdly, as bentonites find their main commercial uses in bonding foundry molding sands, oil well drilling, oil decolorization and catalysis, water impedance, pelletizing iron ore, etc., the physical properties which determine such commercial usage are studied, together with the possible influence of bentonic material on the engineering and agricultural properties of soils.

Price: Dfl. 131.00

Orders to: Elsevier Science Division, P.O. Box 211, 1000 AE Amsterdam, The Netherlands or Elsevier North Holland, 52 Vanderbilt Ave., New York, NY 10017, USA (for USA and Canada).

Diversity of Soils in the Tropics. ASA Special Publication Number 34. American Society of Agronomy and Soil Science Society of America, 1978, 120 p. ISBN 0-89118-055-9.

This publication contains seven papers presented at a special symposium during the annual meetings of the ASA and SSSA in Los Angeles, California, 13-18 November 1978. The purpose of this publication is to present new information regarding the macro- and microdiversity of soils in the tropics in an effort to erase lingering misconceptions about their uniformity and unique characteristics. Topics include spatial, macro-, micro-, and geographic variability as well as soil management, in terms of fertility levels and planting and harvesting schedules.

Price: \$ 5.00, advance payment and 50 cents postage required on orders outside the U.S.

Orders to: American Society of Agronomy, 677 South Segoe Road, Madison, Wisconsin 53711, U.S.A.

Ferrollysis, a soil-forming process in hydromorphic conditions. R. Brinkman. Agric. res. Rep. 887, Pudoc, Wageningen, 1979, 196 p. Also: doctoral thesis Agr. Univ. Wageningen. ISBN 90-220-0699-9.

A hypothesis was proposed explaining clay decomposition and interlayering in acid, seasonally wet soils, under the influence of the periodic reduction and oxidation of iron. This process, termed ferrollysis, is as follows. In the wet season, reduction of ferric oxides produces dissolved ferrous iron, which displaces and mobilizes exchangeable bases. The bases (and dissolved ferrous iron) are partially removed by leaching. In the dry season, oxidation of exchangeable ferrous iron produces ferric oxides and exchangeable hydrogen leading to partial decomposition of the clay and release of aluminium and silica. Aluminium interlayers with trapped ferrous iron are formed in 2:1 clays by partial neutralization of exchangeable aluminium together with reduction of ferric oxides in the wet season; thus the cation exchange capacity decreases further.

The implications of ferrollysis were tested by morphological, chemical and mineralogical analysis of several acid, seasonally wet soils from South-east Asia and different parts of Europe. The effects of various other processes, e.g. cheluviation and clay translocation, were also identified in some of these profiles.

Until now, ferrollysis was not clearly distinguished from cheluviation (podzolization *sensu stricto*), clay translocation and desilication. Therefore, criteria are given to differentiate between the effects of these processes.

Price: Dfl. 40.00, plus postage

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

Elements of System-Dynamics; A Textbook with exercises. Th. J. Ferrari. Pudoc, Wageningen, 1978, 96 p. ISBN 90-220-0668-9.

The aim of this textbook is to give the reader an understanding of the principles of feedback systems and of the origin of actual phenomena and the skill in converting the problems into system-dynamics relational diagrams and simple algebraic equations. With these equations one can calculate how the behaviour of the systems is influenced.

This book assumes that the reader does not have much knowledge of mathematics. Therefore, the essentials of the necessary mathematics are gradually introduced. It emphasizes the practical applications of the system-dynamics concept by providing working problems and solutions.

Experience shows that the concepts and principles of system-dynamics are fairly easy to learn but are difficult to convert into the language of system-dynamics.

Examples and problems are taken from different disciplines like physics, chemistry, process control, biology, ecology, hydrology, environmental health science, economics, social science etc. The problems are so treated that readers from other disciplines can solve them with system dynamics. The advantage of this approach is that the reader becomes aware of the way problems from various disciplines can be described and explained analogously. This is important for an interdisciplinary approach to the problems.

Price: Dfl. 20.—

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

Irish Resources and Land Use. D. A. Gilmore, editor. Institute of Public Administration, Dublin, 1979. 295 p. ISBN 0-902173-84-7.

This book describes the type and extent of the natural resources of the Irish Republic. There are chapters on land use, water, minerals, soils, agriculture, forests, fisheries and wildlife among others. The book is illustrated with over fifty maps and contains many tables. The soils chapter outlines the main soil-forming processes and the classification, nature and evaluation of Irish soils and contains a simplified soil map with 27 soil associations.

Price: £ 11.99 plus postage

Orders to: Institute of Public Administration, 59 Lansdowne Road, Dublin 4, Ireland.

Properties and Management of Forest Soils. W. L. Pritchett. John Wiley & Sons, Chichester and New York 1979, 500 p. ISBN 0-471-03718-4.

The fundamentals of forest soils are presented with particular reference to the application of basic principles of soil science to silviculture. The book describes the forest floor as the centre of biological activity and the storehouse of cycling nutrients and examines the influence of the forest cover on the biological, chemical, and physical properties of soils.

The first part of this book treats the basic properties of forest soils and the dynamic processes important to forest ecosystems. It includes chapters on soils associated with the major forest biomes, the forest floor, soil biology, chemical and physical properties, soil water, nutrient cycling and factors influencing site productivity.

The second part is concerned with soil management and the consequences of forest management on the environment. The part includes chapters on the classification of forest lands, silvicultural techniques, the diagnosis and correction of nutrient deficiencies and various effects of the use of fertilizers.

This book is written for foresters, silviculturists, soil scientists and ecologists as well as for lectures and students in these subjects.

Price: £ 9.50 or \$ 24.75

Orders to: John Wiley & Sons, Baffins Lane, Chichester, Sussex PO19 1UD, England, or John Wiley & Sons, 605 Third Avenue, New York, NY 10016, U.S.A.

Saharan Dust, Mobilization, Transport, Deposition. C. Morales, editor. SCOPE Report 14. John Wiley & Sons, Chichester and New York, 1979, 297 p. ISBN 0-471-99680-7.

Scientists have recently estimated that each summer during the early 1970's no less than 60–200 million tons of soil dust were blown out of the Sahara and surrounding areas over the Atlantic Ocean. This enormous transport of dust coincided with the years of drought and famine in the Sahel of West Africa.

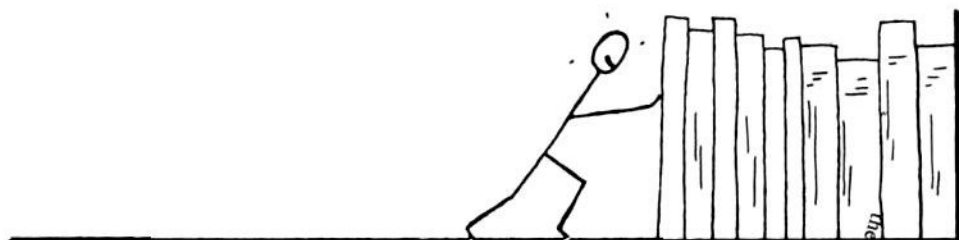
What processes are responsible for the transport of this dust and what does it mean in terms of loss of productive soil by wind erosion in Africa, the pollution of the air and possible impact on climate, and the supply of nutrients and soil particles to the ocean and land areas under the dust trajectories?

In order to highlight these questions a Workshop on Saharan Dust was arranged in Gothenberg, Sweden, in April 1977, with the participation of scientists of several different disciplines including meteorology, ecology, sedimentology and pedology.

This report contains the Review and Recommendations from the Workshop as well as the major part of the papers presented. It has been compiled by the Ecological Research Committee in cooperation with the Scientific Committee on Problems of the Environment (SCOPE) of ICSU.

Price: £ 13.25 or \$ 33.—

Orders to: see above.



Introduction to the study of soils in tropical and subtropical regions (3rd edition, revised). P. Buringh. Pudoc, Wageningen, 1979, 124 p. and 16 full-page colour photographs. ISBN 90-220-0691-3.

The third, fully revised edition of this introductory book is centered around the soil units of the FAO-Unesco Soil Map of the World and the (sub)orders and great groups of Soil Taxonomy. It has also short chapters on land use and constraints, diagnostic soil horizons and properties, agricultural productivity, soil erosion and improvement, land evaluation and soil investigation in the tropics. It also contains a list of some older soil names and their equivalent in the Soil Map of the World. Colour photographs of sixteen profiles of (sub)tropical soils are accompanied by the soil characteristics and a short agricultural evaluation.

The book has been written for young soil scientists and specialists in related disciplines who show an interest in soils of these regions.

Price: Dfl. 25.00

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

Factual Data Banks in Agriculture. Proceedings of the symposium, organized by the Commission of the European Communities, Luxemburg, 12-13 July 1977. Pudoc, Wageningen, 1978, 121 p. ISBN 90-220-0674-3.

The exchange of information by experts is the essential feature and object of all meetings bearing the title 'symposium'. This was certainly the case with this symposium on data banks in agriculture within the European Community. It was organized by the Directorate-General for Scientific and Technical Information and Information Management of the Commission of the European Communities, on the initiative of the Agricultural Working Group of the Committee for Information and Documentation in Science and Technology (CIDST).

The wide spread of subjects has been divided into three groups: animal production, including food technology; plant production, including soil science; and agricultural management information systems. Variances in description of the concept of data banks as well as a vagueness in conceptions of the word were and are typical of a first meeting on a subject which did not begin to flourish until the seventies.

The exchange of information was intended to be a basis for consideration of the possibilities for collaboration within the European Community and for the avoidance of duplication of effort in the various countries. This is of course particularly important in connection with the creation of a network for data communication in Europe (EURONET).

The publication of these proceedings is a further step on the road to the improvement of compatibility and collaboration between data banks within the Community.

Price: Dfl. 20.00

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

Allgemeine Geobotanik, Zweite Auflage, H. Walter. Uni-Taschenbücher 284. Verlag Eugen Ulmer, Stuttgart, 1979, 260 S. ISBN 3-8001-2478-5.

Ein Taschenbuch soll eine kurze Einführung sein und nicht eine vollständige Übersicht der Methoden und Probleme eines bestimmten Wissensgebietes vermitteln; daher ist es besonders wichtig, sich auf das Wesentliche zu beschränken. Diezer Zielsetzung wird die jetzt erschienene 2., verbesserte und ergänzte Auflage des UTB 'Allgemeine Geobotanik' vollauf gerecht. Geobotanik kann zwar nicht aus Büchern erlernt werden, doch können diese zu genauen Beobachtung und Versuchen in der Natur anregen. In der vorliegenden Einführung sind hauptsächlich die Verhältnisse in Mitteleuropa berücksichtigt. Teil I behandelt die Floristische Geobotanik oder Arealkunde, Teil II die Historische Geobotanik, Teil III die Zöologische Geobotanik mit einer kurzen Übersicht der wichtigsten mitteleuropäischen Vegetationseinheiten und Teil IV die Ökologische Geobotanik. Hier wird u.a. auf den Wärmefaktor oder die Temperaturverhältnisse, den Wasserfaktor oder die Hydraturverhältnisse, den Lichtfaktor und den Assimilathaushalt, chemische und mechanische Faktoren, den Abbau der organischen Verbindungen im Boden eingegangen. Die Art der Darstellung ist ungemein fesselnd, die Bemalung vorzüglich. Die nach verhältnismässig kurzer Zeit notwendig gewordene 2. Auflage gab dem Verfasser Gelegenheit zu einer Reihe von Verbesserungen, mit welchen das Lehrbuch auf den aktuellen Stand gebracht wurde.

Betrag: DM 19,80. zuzüglich Porto und Versandkosten

Bestellungen: Verlag Eugen Ulmer, Postfach 1032, D-7000 Stuttgart 1, Bundesrepublik Deutschland.

International Clay Conference 1978. M. M. Mortland and V. C. Farmer, editors. Developments in Sedimentology 27. Elsevier, 1979, 662 p. ISBN 0-444-41773-7.

Proceedings of the Sixth International Clay Conference held in Oxford, 10-14 July, 1978. Of the 182 papers presented at this conference, 54 are published in this volume while a further 118 papers are listed by title, author and research centre. In addition, 7 up-to-date reviews are given on various aspects of clay science by experts in their field. The papers are grouped into the following sections: Crystal Chemistry and Structure; Colloidal Properties and Surface Chemistry; Geology and Sedimentology; Genesis and Synthesis; Applied Clay Mineralogy; Non-crystalline and Accessory Minerals; Kaolin Investigations.

New insight in problems of clay science are provided by such novel techniques as X-ray photo-electron spectroscopy, neutron scattering and Mössbauer spectroscopy. Among the fields of research are ocean sedimentology, North Sea oil well stratigraphy, heavy metal trapping by layer silicates and poorly crystalline oxides and silicates.

Price: Dfl. 125,00

Orders to: Elsevier Science Division, P.O. Box 211, 1000 AE Amsterdam, The Netherlands, or: Elsevier North Holland, 52 Vanderbilt Ave., New York, NY 10017, U.S.A.

Formation and Properties of Clay-Polymer Complexes. B. K. G. Theng. Developments in Soil Science 9. Elsevier, 1979, 362 p. ISBN 0-444-41706-0.

The study of clay-polymer interactions is a relatively young discipline and the growing, by now extensive, literature is widely dispersed. This book is aimed to be a coherent, comprehensive and critical account of the subject. It opens with a discussion of the salient features of clay mineral structures, the properties of aqueous clay suspensions including a treatise of the electrical double layer theory. The behaviour of organic polymers at clay surfaces is then discussed followed by a systematic treatment of the reactions of clay minerals with various classes of natural and synthetic polymers. The important properties of the resulting complexes and some practical applications of the clay-polymer interaction are described. Each chapter is written as a self-contained review paper with a comprehensive list of references. In addition to being a reference work, the book is useful for teaching purposes.

Price: Dfl. 132,00

Orders to: Elsevier Science Division, P.O. Box 211, 1000 AE Amsterdam, The Netherlands, or: Elsevier North Holland, 52 Vanderbilt Ave., New York, NY 10017, U.S.A.

Soil Physics: Selected Topics. A. Kézdi. Developments in Geotechnical Engineering 25. Elsevier, Amsterdam, 1979, 160 p. ISBN 0-444-99790-3.

Study of the physical characteristics of soil became indispensable in view of the ever increasing problems of engineering construction. The action of huge dynamic and static forces upon the foundations of very large and heavy structures, highways and runways, earth dams having a height of several hundred meters, slopes of deep cuts and open coal pits, etc. widened essentially the field of applied soil mechanics, the civil engineer having to solve problems of hitherto unknown size and importance. The problems required profound analysis of the physical properties of the raw material. This initiated a great upsurge in soil physics research all over the world: new laws and relationships were discovered which facilitated the quantitative description of soil behaviour.

This book presents some recent results in the research field of Soil Physics, a discipline which has shown rapid development in recent years. The purpose of the book is to widen the horizon of civil engineers working in the field and to promote the knowledge of behaviour of real soils. Some results are ready to use in practice, others are the first steps toward this goal.

Price: Dfl. 135,00

Orders to: Elsevier Scientific Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands.

CAB/CAIN Evaluation Project. Susan Harvey. Pudoc, Wageningen, 1979, 93 p. ISBN 90-220-0704-9.

This publication is a comparative study on the performance of two agricultural databases in a computerized current awareness service. Chapters include the description of the system; evaluation criteria; methodology; statistics; results-service performance; results-user attitude; and summary and general conclusions.

Price: Dfl. 10.00

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

Soils and their Biological Productivity. Estonian Agricultural Academy, Tartu, 1979, 268 p.

This booklet contains 100 abstracts of the papers presented at a conference held at the occasion of the 60th anniversary of the Department of Soil Science and Agronomical Chemistry of the Estonian Agricultural Academy. This jubilee conference was held in Tartu from 11-12 October 1979. Soil science was read at Tartu University by F. Schamltz as long ago as 1829/1830 and an independent Department of Soil Science and Agronomical Chemistry was created in 1919. At present, Professor Loit Raintam is head of the Department. The abstracts are in Russian, followed by short summaries in English.

Price: 2.30 roebel

Orders to: Dept. of Soil Science and Agronomical Chemistry, Estonian Agricultural Academy, Viljandi Road, Eerika, 202400 Tartu, Estonian S.S.R., U.S.S.R.

The Soil – Root Interface. J. L. Harley and R. Scott Russel, editors. Proceedings of an International Symposium held in Oxford in 1978. Academic Press, London and New York, 1979, 448 p. ISBN 0-12-325550-3.

While some aspects of the interactions between plant roots and the soil have been investigated for a century or more, there are others about which very little was known until recently. The growth of interest in this field of research has to a large extent been due to the development of new experimental techniques which have permitted the examination of the more complex factors of water supply, nutrient availability and the pathology of plants. The specialized knowledge required for these studies necessitates a multidisciplinary approach and those involved felt that there was a need to meet to discuss ideas and recent progress in the physical, chemical, biochemical, biological and microbiological characteristics of the interfacial region. This volume is the outcome of that meeting, which was held in Oxford in March 1978. It is published under the aegis of the New Phytologist.

The large numbers of papers and the variety of topics submitted emphasized the timeliness of the meeting. The subjects discussed included nutrient demand and supply, biological activity at the root surface and the interfacial aspects of the effects of soil-borne diseases and environmental stress on plant growth. This book will be useful to all soil biologists, plant physiologists, soil chemists and soil physicists, acquainting them with each other's work and promoting further exchanges between them. It will also be valuable as a source of reference to those working in agriculture and forestry research establishments.

Price: £ 15.40 or \$ 32.35

Orders to: Academic Press Inc. (London), 24-28 Oval Road, London NW1 7DX, England, or Academic Press, 111 Fifth Avenue, New York, Ny 10003, U.S.A.

The Equatorial Rain Forest: a geological history. J. Flenley. Butterworths, London and Boston, 1979, 162 p. ISBN 0-408-71305-4.

This book is based upon much research carried out during the last 5–10 years and enlightens the vegetational history of equatorial regions. After a historical review of the vegetational developments during the Cretaceous and Tertiary periods, separate chapters discuss the Quaternary vegetation of equatorial Africa, Latin America and Indo-Malesia. These chapters include accounts on the present vegetation, biogeographical problems, modern pollen rain, and the fossil pollen evidence. There are also interesting chapters on the influence of man and on successional changes in the regions. The book is illustrated with photographs, graphs, and a large number of pollen diagrams and has an extensive bibliography of over 460 references.

There is a growing concern about a variety of developments affecting the future of vegetation and soils in equatorial regions. This book should be of interest to soil scientists working or interested in these areas.

Price: £ 25.00 (UK)

Orders to: Butterworth & Co., 88 Kingsway, London WC2B 6AB, England, or Butterworth, 10 Tower Office Park, Woburn, Mass. 01801, U.S.A.

Biogeography and Soil Geography. Vol. 4 of International Geography. Pergamon Press, Oxford, 1978, 195 p. ISBN 0-08-023144-6f.

This book contains short edited summaries of papers presented at the 23rd International Geographical Congress, held in Moscow in 1976. The topics covered are: general problems of biogeography, natural ecosystems and their man-made transformation, biogeographical aspects of medical geography, and soil geography.

Price: \$ 15.00

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

Natural Zeolites, Occurrence, Properties, Use. L. B. Sand and F. A. Mumpton, editors. Pergamon Press, Oxford and New York, 1978, 567 p., 429 illustrations and diagrams. ISBN 0-08-0211922-5.

This volume contains a selection of papers from the Zeolite 1976 Conference, held at Tucson, Arizona, on the occurrence, properties and utilization of natural zeolites. These proceedings are the first of their kind: all recent advances are covered with extensive reviews of the geological occurrence, adsorption and ion-exchange properties of the natural zeolites. Anyone interested in the occurrence and properties of zeolitic minerals and in their potential utilization will wish to have this book as a reference.

Price: £ 42.— or \$ 75.—

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

Multivariate Statistical Analysis in Geography. R. J. Johnston. Longman, Harlow, 1978. 398 p. ISBN 0-582-48677-7.

This manual introduces to geography students the methods and procedures of multivariate statistical analysis. Little mathematics beyond simple arithmetic geometry and algebra is required.

The book begins by reviewing some basic concepts relevant to an appreciation of multivariate analysis. This is followed by a discussion on the use of statistics in research reports. The author focuses mainly on aspects of the general linear model, and in particular on multivariate analysis and procedures. Throughout the book, the various methods of analysis are illustrated with geographical examples. The final chapter includes a look at the problems raised by geographical data.

Price: £ 5.95 (cased)

Orders to: Longman, Burnt Mill, Harlow, Sussex, Cm20 2JE, England.

Natural Building Stones; Soil and Rocks; Peats, Mosses, and Humus. American Society for Testing and Materials, Philadelphia, 1978. 576 p. ASTM publication code 01-019078-38.

This is Part 19 of the Annual ASTM Standards 1978. It contains 116 standards of which 21% are new, revised or changed in status since the 1977 edition. The book covers: natural building stones, soil and rocksoil, soil-cement, rock, bituminous materials for highway construction, peats, mosses, humus and related products, laboratory apparatus and general testing methods.

Price: \$ 18.00

Orders to: ASTM, Sales Service Department, 1916 Race Street, Philadelphia, PA 19103, U.S.A.

Computations for studies of soil fertility and fertilizer requirements. J. D. Colwell. Commonwealth Agricultural Bureaux, Farnham Royal, 1979, 297 p. ISBN 0-85198-437-1.

The book contains a series of computer programs that can be used for processing data to obtain answers to common questions in soil fertility studies. What recommendation should be made on fertilizer use as the result of a fertilizer experiment or a series of experiments? Given a soil deficiency in several nutrients, what is the relative economic importance of the various deficiencies and which of a series of fertilizers should be recommended to correct the deficiencies? Are fertilizer requirements related to type of soil and if so what should be the general recommendation for particular soils? How big and important are the trends shown by the data of fertilizer experiments and how good were the experiments? Can soil tests be used to help in the estimation of fertilizer requirements and if so how valuable are they? Should money be spent establishing more soil testing laboratories or on more fertilizer experiments?

The mathematics and economics that are basic for the computer programs are described in some detail. The programs were all developed in FORTRAN 4 on a large computer and then adapted for use on relatively small computers.

Price: UK £ 12.50, overseas £ 15.00, postfree.

Orders to: Central Sales, Commonwealth Agricultural Bureaux, Farnham House, Farnham Royal, Slough SL2 3BN, England.

Rekultivierung zerstörter Landschaften. J. Barner. F. Enke Verlag, Stuttgart, 1978, 220 s. ISBN 3-432-89901-7.

Rekultivierung zerstörter Landschaften – ein aktuelles weltweites Problem, das seine Ursprünge bereits in der Antike hat, wird hier auf ca. 200 Seiten abgehandelt: Grundlagenermittlung, ökologische Gesichtspunkte, Arbeitsmethoden und -techniken mit Schwerpunkt auf dem Meliorationswesen und der Anbautechnik, Berücksichtigung des planerischen Gesamtinstrumentariums.

Es wird die Rekultivierung wasserhaushaltsgeschädigter, boden- und klimageschädigter Landschaften nebst ihrem ökologischen, meliorations- und anbautechnischen Instrumentarium dargestellt und anschaulich gezeigt, dass die Landschaftsrekultivierung aus ihrer früheren, rein empirisch eingestellten Phase heute in eine experimentelle ökologisch nachprüfbar Phase eingetreten ist. Das Werk wendet sich in erster Linie an den mit derartigen Aufgaben befassten Kulturtechniker in der Praxis. Der systematische Aufbau des Buches, ein umfangreiches Literatur- und Sachverzeichnis macht es aber auch zum Lehr- und Handbuch für einen grösseren Leserkreis (z.B. an Universitäten, Fachhochschulen, Behörden).

Betrag: DM 34,00, zuzüglich Porto- und Versandkosten

Bestellungen: Ferdinand Enke Verlag, Postfach 1304, D-7000 Stuttgart 1, Bundesrepublik Deutschland.

Considerations on the Use of Antibiotic Fermentation Wastes as Fertilizers. A Review of Their Past Use and Potential Effects on the Soil Ecosystem. M. W. M. Bewick. Special publ. 4. Commonwealth Bureau of Soils, 1977, 20 p.

Estimates are given of the quantities of antibiotic wastes that are currently produced by the pharmaceutical industry, and the disposal of both treated and untreated waste is discussed. The use of antibiotic wastes as animal feeding stuffs is considered in some detail from which it is concluded that utilization as fertilizers is likely to be less problematical.

The review continues with a discussion of the fertilizer value of antibiotics wastes, the fate of residual antibiotics in soil, the effects of antibiotics on soil biology and the effects of residual antibiotics on plants.

Price: UK £ 2.—, elsewhere £ 2.40 or \$ 4.80, postfree

Orders to: Commonwealth Bureau of Soils, Rothamsted Experimental Station, Harpenden AL5 2JQ, Herts. England.

Zinc Fertilization and Behaviour in Flooded Soils. D. S. Mikkelsen and Shiou Kuo. Special publ. 5. Commonwealth Bureau of Soils, 1977. 59 p.

Zinc deficiency is the most common micronutrient problem in flooded rice. Since the disorder was first reported in 1966, it has become recognized as an important and widespread problem. The condition is discussed in relation to the zinc status of rice soils, zinc uptake by the plant, the diagnosis of zinc deficiency by soil and plant analysis, and the correction of the deficiency by the application of zinc fertilizers. Attention is drawn to the need for research on the complex chemical, physico-chemical and biological reactions regulating zinc availability when a soil is flooded and to the paucity of knowledge on the residual benefits of zinc fertilizers and the possibilities of zinc toxicity.

Price: UK £ 2.20, elsewhere £ 2.65 or \$ 5.30, postfree

Orders to: see above.



Agricultural Research Index, 6th edition. J. Burkett, editor. Longman, Edinburgh, 1028 p. ISBN 0-582-90000-x.

The Agricultural Research Index was first published in 1944 and is now available in a revised and up-dated sixth edition. It is a comprehensive, world-wide, guide to establishments which are involved in agricultural research and related subjects. It includes government departments, research institutes, universities and colleges, and industrial research departments. It is published in two volumes, and contains 8000 entries from 144 countries, while each entry is cross referenced in two indexes with the original language title and the english language title.

Price: UK £ 75; non-UK £ 78, postfree if pre-paid

Orders to: Longman Group, 43-45 Annandale Street, Edinburgh EH7 4AT, Scotland.

Physics of Minerals and Inorganic Materials. A. S. Marfunin. Springer Verlag, Berlin and New York, 1979, 340 p. ISBN 3-540-08982-9 (in U.S.A. 0-387-08932-9).

Solid-state theories and spectroscopy account for the third crucial change within this century in our concept of the basis of mineralogy and the inorganic materials sciences. This book is a revised, updated, and supplemented translation from the Russian edition, providing a complete system of recent theories of solids as they apply to minerals and inorganic materials. Both basic principles and sophisticated new theories are presented with the mineralogist and materials researcher in mind. The book contains extensive references for further study and will be a valuable reference work since each chapter is self-contained.

It is translated from the Russian By G. Egorova and A. G. Mishchenko. This book is especially of interest to researchers, instructors and students in mineralogy, geochemistry, crystal chemistry, chemistry of silicates, and petrology.

Price: DM 98.00

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

Proceedings of the International Drainage Workshop. ILRI Publication No. 25. J. Wesseling, editor. ILRI, Wageningen, 1979, 731 p. ISBN 90-70260-54-9.

In 1978 an International Drainage Workshop was held in Wageningen, The Netherlands. Drainage specialists from several countries discussed the state-of-the-art in subsurface drainage: on the research, the design, the installation and evaluation of the system. More than 50 discussion papers were contributed by the participants, to facilitate the exchange of information on the various subjects. These were dealt with in 4 discussion groups: design and research, drainage materials, installation methods, and drainage of irrigated lands. The book contains a brief review of the papers, discussions, conclusions and recommendations, as well as the papers presented at the Workshop.

Price: Dfl. 60.00, postfree if pre-paid

Orders to: International Institute for Land Reclamation and Improvement, P.O. Box 45, 6700 AA Wageningen, The Netherlands.

Drainage and Reclamation of Salt-Affected Soils, Bardanas area, Spain. ILRI Publication No. 24. J. Matinez Beltran. ILRI, Wageningen, 1978, 321 p. (Doctoral thesis, Agricultural University, Wageningen).

This study deals with the salinity problems, occurring in the Bardanas area in northeastern Spain. The region is the driest part of northern Spain, because it is surrounded by high mountain ridges which isolate it from any Atlantic and Mediterranean influences. If water is available from rivers originating in the Pyrenees and the Iberian Mountains the climate permits irrigated agriculture. One of the conclusions of the survey was that field experiments should be conducted to study the technical and economic aspects of draining and leaching of these saline soils.

Price: Dfl. 30.00, postfree if pre-paid

Orders to: International Institute for Land Reclamation and Improvement, P.O. Box 45, 6700 AA Wageningen, The Netherlands.

Agricode for Agricultural Libraries. F. A. Koekebakker. Pudoc, Wageningen, 136 p. ISBN 90-220-0567-4.

The Agricode is a basic classification scheme for specialists classifying agricultural documents. This code contains special classification schedules pertinent to the full range of scientific and technical primary source publications, that are relevant to the agricultural sciences as a whole and to the related fields of agriculture.

The Agricode is developed from the Universal Decimal Classification as basic principle for the classification and is designed to provide the users of the agricultural sciences literature complete identification of source publications by their subjects concepts and to assist them in gaining access to the original source documents or scientific concepts. It has about 300 entries.

Price: Dfl. 40.— plus packing and postage

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

Agriculture in Semi-Arid Environments. Ecological Studies Volume 34. A. E. Hall, G. H. Cannell, and H. W. Lawton, editors. Springer Verlag, Berlin, 1979, 340 p. ISBN 3-540-09414-8 (in USA 0-387-09414-8).

This is the first multidisciplinary survey of agriculture in semi-arid zones worldwide. Unfortunately, agriculture in semi-arid environments has thus far largely been neglected, and droughts in these areas have resulted in major famines. The book is unique in its combination of agricultural sciences, geography, and ecology, and in its focus on semi-arid West Africa - an area for which little information has been available up until now, and where there is a critical need for agricultural development. It also includes an analysis of the interactions between cropping and livestock systems in this region, illustrating the need for an ecological approach to rural development in semi-arid zones which takes economic, political and sociologic factors into consideration.

Price: DM 89.00

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

Soil Development in recent Marine Sediments of the Intertidal Zone in the Oosterschelde-the Netherlands. A Soil Micromorphological Approach. M. J. Kooistra. Soil Survey Papers No. 14. Netherlands Soil Survey Institute, Wageningen, 1978, 184 p. ISBN 90-327-0002-2. (Doctoral thesis, University of Amsterdam).

Much of the surface of the Netherlands has been reclaimed from marine deposits, and marine clay soils now cover about 30 % of the total area of the country. Although the study of subjects related to sedimentation and reclamation began about 3 centuries ago, not much attention was paid to pedogenesis occurring during the development of coastal accretions before reclamation. The present study is focused on soil development in this area, with emphasis on micromorphological investigations of thin sections. The first chapter of the book describes the geological history of the southwestern part of the Netherlands and the genesis of intertidal zones. The second chapter deals with the field investigations, followed by the results of physical and chemical analyses. In the fourth chapter the micromorphological investigations are discussed. The publication contains many photographs and tables, the soil and vegetation and analytical data of 21 selected profiles, and detailed soil and vegetation maps of the study area.

Price: Dfl. 35.00

Orders to: Netherlands Soil Survey Institute, P.O. Box 98, 6700 AB Wageningen, The Netherlands.

Give Us The Tools. Science and Technology for Development. D. Spurgeon, editor. IDRC, Ottawa, 1979, 190 p. ISBN 0-88936-213-0

This book describes how the idea to create the International Development Research Centre arose, how the early concepts were changed in the reality and what the Centre actually became. The first two chapters outline what happened to produce the IDRC as it is today and go on to tell how the Centre functions.

The main part presents 11 case histories of projects that illustrate different aspects of the Centre's programs written by the people in Third World countries who are familiar with them. The book concludes with an analysis in general of the role of research in solving the problems of developing countries. This story about the unique character of the IDRC deserves a large audience, also within the world of soil scientists.

Price: Can. \$ 7.00

Orders to: Communications Division, International Development Research Centre, Box 8500, Ottawa, Canada, K1G 3HG.

Neutron Activation Analysis – A Review of the Method and its Present and Potential Uses in Agriculture and Soil Science. J. A. Campbell and M. W. M. Bewick. Special Publication No. 7. Commonwealth Agricultural Bureaux, Farnham Royal, 36 p. ISBN 085198-438-X.

The basic principles of the technique are reviewed and the application of the method to agriculture and soil science is discussed. The method is extremely sensitive and is capable of determining several elements simultaneously without destruction of the sample in many cases. The main bibliography contains 107 citations and an additional 37 references are suggested for further reading. Four organizations offering activation analysis services on a commercial basis are listed in an appendix.

Price: UK £ 2.50, outside UK £ 3.00 (postfree)

Orders to: Central Sales, Commonwealth Agricultural Bureaux, Farnham House, Farnham Royal, Slough SL2 3BN, England.

Spectrochemical Analyses by Atomic Absorption. W. J. Price. Heyden, London and Philadelphia, 1979, 400 p. ISBN 0-85501-455-5.

This book provides a comprehensive and up-to-date survey of current techniques and applications. In particular, full coverage is given of the areas in which most recent progress has been made: the design and performance of electrothermal atomizers, and the use of microprocessors in control functions.

After opening with a survey of basic principles the book discusses the formation of atomic vapours. Instrumentation, analytical techniques in flame atomic absorption, and electrothermal atomization techniques are fully covered in the following sections. The core of the work is devoted to the applications and practice of Atomic Absorption Analysis in many fields. Next comes a section which presents in tabulated form the analytical data for the individual elements. Other features of the book include an Appendix on manufacturers and equipment, and a large bibliography. This handbook is a laboratory aid for everyone involved with analysis by these techniques, as it presents the user with practical ideas and ways of approach which are supported by experience.

Price: £ 14.15, \$ 28.50, DM 65.50, postfree if pre-paid

Orders to: Heyden & Sons, Spectrum House, Hillview Gardens, London NW4 2JQ, England; or 247 South 41st Street, Philadelphia, PA 19104, U.S.A., or Münsterstrasse 22, 4440 Rheine, West Germany.

Soil Science, principles and practices. Second edition. R. L. Hausenbuiller. Wm. C. Brown, Dubuque, 1978, 611 p. ISBN 0-697-05853-0.

The basic format of the first edition of this textbook, published in 1972, remained the same. It is written as an introduction to soil science for college-level students. It deals with the fundamental characteristics of soil and how these are used in soil classification as well as how they influence soil behaviour for a wide range of uses. The first nine chapters are on soil development, classification and survey. In the following chapters aspects of soil fertility, productivity, salinity and erosion are discussed. The text finishes with parts on soil water management and soil pollution and a newly added chapter on engineering properties of soils.

The book provides a rather extensive glossary and selected references and contains many graphs, tables and photographs, some of which in colour.

Price: \$ 14.95 plus postage and packing

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

Fieldbook for Land and Water Management Experts (Provisional edition). ILRI, Wageningen, 672 p.

Engineers and scientists working in the field are often confronted with problems outside their own particular profession. This Fieldbook could provide them with information that would give them insight into these problems and perhaps suggest ways of solving such problems. It has the following subjects: Geology, Geomorphology, Climatology, Surface hydrology, Geo-hydrology, Soils, Agro-hydrology, Agronomy and Coastal engineering. The book contains many graphs, tables and figures. It is a reprint of the loose-leaf edition, and has been produced in a limited number of copies.

Price: Dfl. 68.— plus packing and postage

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

Spruce Forest Ecosystem Structure and Ecology, I. T. Frey, editor. Academy of Sciences of the Estonian S.S.R., Tartu, 1977 156 p.

This is the first part of volume II in the series 'Estonian Contributions to the International Biological Programme - Progress Report' and discusses various aspects of terrestrial ecosystem research, using mixed hardwood-spruce forest of the temperate zone as an example. The research project is carried out by a team of 30 scientists representing a wide variety of disciplines. The project started in 1969 and is still going on.

The first part contains chapters on climate and soils of the Voreema Forest Ecology Station, primary production of a spruce forest ecosystem. Two more parts are in press.

Price: 1.90 roebel

Orders to: IBP Estonian National Commission, Vanemuise 21, 202400 Tartu, Estonian S.S.R., U.S.S.R..

IRRICAB. A quarterly from the IIIC.

This is a current annotated bibliography of irrigation, published by the International Irrigation Information Center, a non-profit corporation, whose activities are supported by the State of Israel and the International Development Research Centre, Canada. The objective of the Center is to promote progress in irrigation, particularly in developing countries.

Subscription price: US \$ 60.— (1980) including surface mail charges

Orders to: IIIC, Volcani Center, P.O. Box 49, Bet Dagan, Israel; or P.O. Box 8500, Ottawa, Canada K1G 3HG.

Dry Lands: Man and Plants. R. Adams, M. Adams, A. Willens and A. Willens. The Architectural Press, London, 1978, 152 p. ISBN 0-85139-178-8.

Over a quarter of the world's surface is arid or semi-arid, and there are fears that this total may increase sharply as the result of climatic change and growing pressures from an expanding and hungry world population. Urgent needs have led man himself to contribute alarmingly to the continuous depletion of the stock of usable lands through unconsidered exploitation: fertile areas are degrading rapidly and marginal ones are turning into deserts. This timely book shows how the threats to such fragile territories can be arrested, controlled and reversed through the careful management of dry-land ecosystems. It examines the characteristics of arid and semi-arid environments throughout the world and describes the kinds of vegetation they are able to support. Drawing their lessons from nature, the authors show how indigenous vegetation can be used to create developments which are self-sustaining in the long run, based on an approach that works with nature rather than against it. They set out in great detail the techniques that are involved, from the preliminary survey of climate, topography, soils and water through the analysis of the existing ecosystem, to the planning of developments with plants and regimes of irrigation, plant propagation and management of soil, water, vegetation and human settlements. Students of dry lands and the quality of environmental developments in them - agriculturists, botanists, horticulturists, geographers, engineers and land use and landscape planners and designers - will find it to be a comprehensive work of reference and a manual to guide future action and help repair the damage caused by the carelessness of the past.

It is not a soils book *per se*, but soil scientists concerned with the study of dry lands and the quality of environmental development in them will find it to be a work of reference and a manual to guide future action. The book contains many tables, small-scale maps and illustrative photographs.

Price: (UK) £ 12.95 plus postage

Orders to: The Architectural Press Ltd., 9 Queen Anne's Gate, London SW1H 9BY, England.

Normalisation et Echange de Données Pédologique par Ordinateur. Agence de Coopération Culturelle et Technique, Paris, 1978, 192 p. ISBN 92-9028-008.

Des banques de données de sols sont actuellement créées ou exploitées dans de nombreux pays. Un effort original d'harmonisation et de coopération vient d'être tenté par les spécialistes francophones, sous l'impulsion de l'Agence de Coopération Culturelle et Technique. La première phase des travaux s'est concrétisée par la publication d'un ouvrage collectif: 'Normalisation et Echange de Données Pédologiques par Ordinateur'. Cet ouvrage s'appuyant sur l'expérience acquise au plan international est utile à trois points de vue:

- il présente, pour la description des sols, un langage complet qui fait la synthèse des glossaires actuellement existants et tient compte de l'enseignement fourni par les banques pédologiques déjà opérationnelles;
- il propose une structure de coopération entre les banques existantes ou à créer. Les notions de fichier international d'échange et de banque de données de référence sont introduites à cet effet;
- il relate les tentatives d'échange de données déjà réalisées par diverses voies et présente en annexe cinq banques de données pédologiques fonctionnant actuellement.

En dépit de diverses imperfections liées à son caractère collectif, cet ouvrage met en évidence la plupart des problèmes que l'on rencontre lorsqu'on désire bâtir une banque de données relative au domaine biologique. A ce titre, il peut apporter une aide précieuse aux scientifiques concernés. Une publication ultérieure fournira tous les détails nécessaires à la connexion avec le fichier international d'échange.

Prix: FF 25

Commandes. Agence de Coopération Culturelle et Technique, 19, Avenue de Messine, 75008 Paris, France.

Vocabulaire de l'environnement pédologique tropical. Agence de Coopération Culturelle et Technique, Paris, 1978, 81 p. ISBN 92-9028-005-0.

Le présent ouvrage concerne l'environnement du profil pédologique dans les régions tropicales. En pédologie l'environnement comprend l'ensemble des facteurs qui contribuent directement ou non à la pédogénèse, déterminent la morphologie du sol et orientent son utilisation éventuelle. Une connaissance précise des données de l'environnement revêt, dans la prospection pédologique et l'interprétation des données relatives au sol et au territoire prospecté, des intérêts multiples, parfois majeurs.

Ce document s'adresse donc aux pédologues d'abord et ensuite à toute personne susceptible d'exploiter les travaux pédologiques, en particulier dans une optique de mise en valeur et de développement d'une région ou d'un territoire. Ont été retenus aux fins de ce vocabulaire, les termes utilisés le plus fréquemment par les pédologues, la liste ne pouvant en aucun cas être exhaustive. Certains termes se complètent d'une définition ou d'un commentaire lorsque leur interprétation peut prêter à confusion. Les autres, mieux connus, ont été inclus mais sans explication. Il s'agit d'un vocabulaire bilingue: les termes français s'accompagnent d'une traduction en anglais. Dans certains cas cette traduction n'est qu'une équivalence, certaines notions, n'étant pas perçues ou utilisées dans l'une ou l'autre langue. Quant aux définitions elles ne sont présentées qu'en français. Seules sont concernées ici les zones tropicales et sub-tropicales de l'Afrique, à l'exclusion des zones méditerranéennes. Cette aire géographique couvre l'ensemble des pays dans lesquels ont travaillé les experts ayant collaboré à la rédaction de cet ouvrage.

Les termes correspondant aux divers facteurs du milieu naturel ont été groupés sous les sept chapitres suivants: I – Vocabulaire relatif au climat; II – Vocabulaire relatif à la végétation; III – Vocabulaire relatif à l'action de l'homme; IV – Vocabulaire relatif aux formes du relief; V – Vocabulaire relatif à la surface du sol; VI – Vocabulaire relatif au matériel; VII – Vocabulaire relatif à l'eau.

Un index alphabétique avec les termes français complète l'ouvrage.

Prix: FF 15

Commandes: Agence de Coopération Culturelle et Technique, 19, Avenue de Messine, 75008 Paris, France.

Soil Survey Contracts and Quality Control, S. Western. Monographs on Soil Survey, Clarendon Press/Oxford University Press, Oxford, 1978, 284 p. ISBN 0-19-854513-4.

Surveys of soil, pastures, and water resources are an essential part of development projects, local or regional. Much of this work is performed under contract by survey parties from consultant firms or universities under contract. This book describes how to plan such projects and to negotiate the contract, with particular reference to soil survey and the organizational and personnel problems if executing a project under unfamiliar conditions. The author breaks new ground in discussing the problems of 'quality control' in soil survey – how the customer is to specify the detail and precision of the product (the soil map) he hopes to receive and how he is to check and control the quality of the work. Much of the value of the product depends on its relevance to the project under consideration, which is difficult to quantify. The author stresses the vital importance of liaison between the customer and the consultant or contractor. The book is thus highly relevant to technical aid contracts of all kinds.

Price: (UK) £ 10.00

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

World soils (second edition). E. M. Bridges. Cambridge University Press, 1978, 128 p. and 32 colour plates.

The largely revised and updated second edition of this well-known book provides an introduction to the scientific aspects of soils which is fundamental to an understanding of the pattern of soil distribution throughout the world. After chapters on the composition of soils and the factors and processes of soil formation, an introduction is given on Soil Taxonomy, the legend of the FAO-Unesco Soil Map of the World as well as the British System of Soil Classification. In the second part the different soils are discussed according to four broad latitude zones and in a chapter on intrazonal and azonal soils. The last two chapters deal with principles and procedures of soil mapping and the distribution of soils on a world scale and the applications of soil science. This concise, clear introduction to the soils of the world is intended for students of soil science, geography, agriculture and biology. It is generously illustrated with maps, line drawings and 32 colour photographs of soil profiles.

Prices: paperback, ISBN 0-521-29339-1: £ 3.95; hard covers, ISBN 0-521-21956-6: £ 7.95

Orders to: Cambridge University Press, The Pitt Building, Trumpington Street, Cambridge CD2 1RP, England.

Irrigation Book List. IIIC, Israel, 1977, 60 p. ISBN 92-9019-003-9.

The Irrigation Book List has 335 entries of publications in 16 languages. It includes books printed since 1960. Subjects directly related to irrigation are covered, as well as material in supporting fields such as plant physiology, agrometeorology and soil science. Wider aspects such as irrigation economics and policy are also included.

Price: US \$ 3.— including airmail charges

Orders to: IIIC at addresses mentioned above.

Soil, Water and Crop Production. Edited by D. Wynne Thorne and Marlowe D. Thorne. AVI Publishing Company, Westport, 1979, 355 p. ISBN 0-87055-281-3.

This book is of importance to all persons interested in overcoming the world food problems through improved crop production practices. It contains nineteen chapters, written by ten scientists and the editors themselves. The purpose of the book is outlined in the preface: 'with food requirements rising and the tasks of producing food becoming more complicated, there is a need to examine critically present farming systems and to evaluate available and potential technology systems to find the most effective and profitable ways to solve problems'.

The presentation is divided into three parts. First, the book identifies and examines the soil, climate and topography which affect the growth of crops. Second, it discusses the various factors that can be managed to improve crop yields. The third part examines present and potential farming systems of improved crop production in different ecological regions of the world from the temperate zone to the arid and humid tropical zones.

It is regretted to state that Prof. D. Wynne Thorne, who was emeritus professor in soil science at Utah State University, passed away in February 1979, just before this book was off the press.

Price: US and Canada \$ 18.00, other countries \$ 20.00, postfree if prepaid

Orders to: AVI Publishing Co., P.O. Box 831, Westport, CT 06880, U.S.A.

Clays and Clay Minerals of Japan, T. Suda and S. Shimoda, editors. *Developments in Sedimentology* 26. Elsevier, 1978, 344 p. ISBN 0-444-99787-3.

The geological situation in the Japanese Islands represented by volcanic activity through geological time offers many interesting characteristics in the clay and clay minerals. This, and the scientific activity of the many Japanese workers in this field deserve and justify the publication of this book. It provides an organized and coherent account of the geological and mineralogical properties of clays and clay minerals in Japan. The first half covers the history of clay studies in Japan, presented in relation to major studies elsewhere in the world. The second half provides detailed analyses of the major clay minerals, including their distinctive hydrothermal and volcanic ash origins.

Price: Dfl. 140.00

Orders to: Elsevier Science Division, P.O. Box 211, 1000 AE Amsterdam, The Netherlands or: Elsevier North Holland, 52 Vanderbilt Ave., New York, NY 10017, U.S.A.

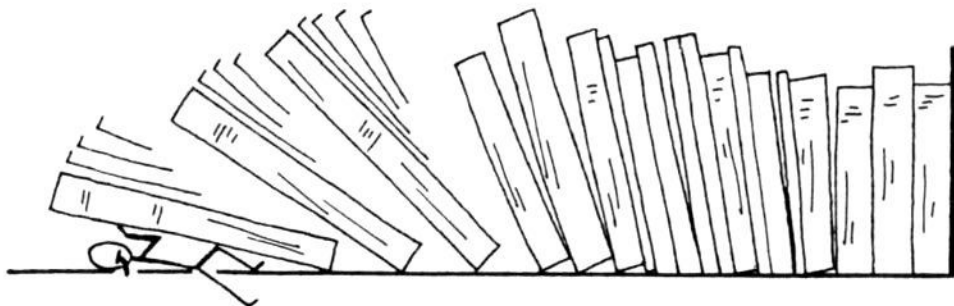
Methods of Studying Root Systems. *Ecological Studies* Volume 33. W. Böhm. Springer Verlag, Berlin, 1979, 188 p. ISBN 3-540-09329-X (in U.S.A. 0-387-09329-X).

In many ecological disciplines the need is apparent for more information on the development and distribution of plant roots in different soils, under various ecological conditions. This book surveys the common methods, primarily field methods, used in ecological root research. Advantages and limitations of the traditional excavation methods are outlined and critical evaluations are made; modern techniques are also presented. Special attention is given to the techniques of root washing, and the determination of root parameters.

This cloth-bound book contains over 100 references to important methodological literature. It is written for graduate students and researchers in agronomy, forestry, horticulture, soil science, crop science, botany and ecology.

Price: DM 69.00

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



Speculations in Science and Technology. A journal from Elsevier Sequoia, Lausanne. ISSN 0155-7785.

This unusual international journal, issued five times per year, is devoted to speculative papers in the physical, mathematical, biological, medical, and engineering sciences. It was launched in 1978 to provide workers in the hard sciences with a forum for their speculative papers and is published by Elsevier Sequoia as of volume 2, May 1979. The journal defines 'speculation' as follows: It is an idea which may not be supported by a currently accepted body of experimental or theoretical work. It may, however, subsequently find such support or may be disproven. Its usefulness is that it may help to uncover ideas and procedures of ultimate utility and, in its discussion, clarify current understanding of an idea.

Subscription price (1980): personal SFrs. 60, institutional SFrs. 130, including postal charges

Orders to: Elsevier Sequoia, P.O. Box 851, 1001 Lausanne 1, Switzerland.

Natural Resources Forum. A quarterly journal from D. Reidel Publishing Company, Dordrecht, ISSN 0165-0203.

In the mid '70s, the energy crisis stunned policy makers and world attention began to focus in earnest on alternative energy methods and the use of natural resources in general. It became increasingly evident in industrial and academic research, that a comprehensive journal on natural resources was lacking. Even the most elementary data collection required a very tedious survey through volumes of books and journals.

To fill this gap for policy makers and researchers, Natural Resources Forum was launched in late 1976 on behalf of the United Nations by Reidel. It is devoted to the study of economic, scientific, technological, and policy aspects of energy, minerals, and water resources development. Methods of increasing supply by exploration, investment and new technologies are examined, as are ways of reducing demand through conservation and substitution. The aims of the journal, therefore, are to acquaint policy makers with current problems of resources and energy development, and to supply accurate and up-to-date information in a readable and comprehensive style. Natural Resources Forum is extremely valuable to those planning long term exploration of the mining of minerals and other energy materials, and of water resources, whether in government or industry. For the banking and commercial sectors, the journal has particular appeal because it lays a strong foundation on the demand-consumption aspect. Finally, it will prove of importance to the academic community in providing a larger perspective on the field of natural resources as a whole.

Subscription price (1980): personal Dfl. 45/institutional Dfl. 109, including postal charges

Orders to: D. Reidel Publishing Company, P.O. Box 17, Dordrecht, The Netherlands, or D. Reidel Publishing Company, Lincoln Building, 160 Old Derby Street, Hingham, MA 02043, U.S.A.

Geotechnical Testing Journal. A quarterly journal from the American Society for Testing and Materials, Philadelphia, U.S.A.

The objectives of this new journal are to inform on new developments in soil and rock testing and related disciplines; and to provide a forum for information exchange, particularly aimed at the development of new or improved testing procedures and equipment.

Subscription prices: \$ 15.— for ASTM members and \$ 30.— for non-members

Orders to: ASTM, Sales Services Department, 1916 Race St., Philadelphia, Pa 19103, U.S.A.

Environmental Management. A journal from Springer International, New York. ISSN 0364-152 X.

This journal serves as a forum for complementary and multifaceted ideas regarding environmental analysis, planning, and management. It provides for an examination of the role of law, government, science, and engineering in environmental management.

Subscription price: 1979 (6 issues) \$ 71.00 including postage

Orders to: Springer Verlag, 175 Fifth Avenue, New York, NY 10010, U.S.A. or Postfach 105280, D-6900 Heidelberg 1, Fed. Rep. of Germany.

Irrigation Science. a quarterly Journal from Springer International. ISSN 0342-7188.

Irrigation Science will publish original contributions and short communications reporting the results of irrigation research, including relevant contributions from the plant, soil and atmospheric sciences as well as the analysis of field experimentation. Special emphasis will be given to multi-disciplinary studies dealing with the problems involved in maintaining the long term productivity of irrigated lands and in increasing the efficiency of agricultural water use.

Aspects of particular interest are:

- Physical and chemical aspects of water status and movement in the plant-soil-atmosphere system.
- Physiology of plant growth and yield response to water status.
- Plant-soil-atmosphere and water management in irrigation practice.
- Measurement, modification and control of crop water requirements.
- Salinity and alkalinity control by soil and water management.
- Ecological aspects of irrigated agriculture.

Editor-in-chief is G. Stanhill, Bet Dagan, Israel.

Subscription prices: \$ 63.50 in North America, Springer Verlag, 44 Hartz Way, Secaucus, NJ 07094, U.S.A.; DM 148 in all other countries, Springer Verlag, Heidelberger Platz 3, D-1000 Berlin 33, Fed. Rep. of Germany.

Geo-Processing, Geo-Data, Geo-Systems and Digital Mapping. A quarterly journal from Elsevier, Amsterdam. ISSN 0165-2273.

Geo-Processing attempts to bring together all groups that are interested in spatial Information Systems. It covers the collection of data with geographical coordinates, their editing, conceptual structures and data structures of regional information systems, methodology for the analysis of spatial data and techniques for their display. The types of systems are cadastral, geocoding, land use and resources, thematic and topography mapping, and Digital Terrain Models. The character of the articles can range from theoretical essays to technical discussions of algorithms and from treatments of the legal and economic aspects of geographic information systems to their practical application in an institutional environment. Types of contributions are: scholastic paper, surveys, reviews, discussions, book reviews, and overviews of recent literature.

Subscription price (1980): Dfl. 85 plus Dfl 16 for postage. Subscribers in the U.S.A. and Canada receive the journal by airmail

Orders to: Journal Division, Elsevier Scientific Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands.

Agricultural Wastes. An International Journal. A quarterly journal from Applied Science Publishers, Barking. ISSN 0141-4607.

Agricultural Wastes provides a forum for original papers concerned with all aspects of the management or treatment of agricultural wastes. The term 'agricultural wastes' covers not only the excreta from animals and birds, but also crop and forest residues, agricultural chemical residues, wastes from processing of animal and vegetable matter on farm or in factory, and wastewaters from food processing plants. The term 'pollution' includes health hazards to man and/or animals. The journal therefore contains papers describing methods of handling of animal excreta, of physical, biological and chemical treatment of excreta so as to reduce pollution on the farm or wider environment. Since such treatments may produce energy or other useful by-products, papers describing processes whose primary aim is production of, for instance, animal feedstuffs, microbial or other proteins, gas and oil, from animal excreta are also published. Similarly, there are papers covering both aspects of treatment of wastes from meat, fruit and vegetable processing.

Papers describing laboratory, pilot-plant or full-scale experiments, which may be generally applicable or may apply only to certain types of farm of climatic conditions, and long-term experience with full-size plant or management systems are also included, as are papers dealing with model systems and the theoretical aspects of agricultural waste management.

Types of contributions are: original papers, review articles, case studies, short communications, reports of conferences and meetings, book reviews, and letters to the Editor.

Subscription prices (1980): in UK £ 32; in U.S.A. and Canada £ 40; elsewhere £ 45, postfree

Orders to: Applied Science Publishers, 22 Ripplside Commercial Estate, Essex IG11 0SA, England.

Reclamation Review. A quarterly journal from Pergamon Press.

This new journal serves the needs of land reclamationists throughout the world and is headed by a board of editors from the U.S., Australia, Canada and U.K. It has a multidisciplinary approach and includes materials from the biological, physical an engineering aspects of environmental control as well as land planning. It is the official journal of the Canadian Land Reclamation Association.

Subscription price: 1980 \$ 77.00; 1980 plus 1981: \$ 146.30; postfree

Orders to: Subscription Fulfillment Manager, Pergamon Press, Headington Hill Hall, Oxford OX3 0BW, England, or Pergamon Press, Maxwell House, Fairview Park, Elmsford, New York, 10523, U.S.A.

Mazingira. A quarterly journal from Pergamon Press.

This non-profit journal (the title means 'environment' in Ki-Swahili) now in its second year of publication, is a quarterly published in English, French and Spanish. It carries as a subtitle: the world forum for environment and development. The topics discussed are thought to be crucial to the survival of the human race. Or, in other words, how can growth and the betterment of our way of life, in the South and in the North of this planet, be achieved in such a way that the damage we cause to our natural environment is not irreversible?

Subscription prices: 1980: \$ 6.00; 1980 plus 1981: \$ 11.40; postfree. \$ 3.— per year, postfree for subscribers in developing countries

Orders to: Pergamon Press (see above).

Environment International. A Journal of Science, Technology, Health, Monitoring and Policy. A bimonthly journal from Pergamon Press.

A multi-disciplinary forum for environmental literature. The journal covers: concentration of elements and compounds, notably pollutants; release rates of pollutants; release rates of pollutants from various sources; transport of pollutants in the environmental media; health and ecological effects of pollutants, control technologies.

Subscription price: 1980: \$ 121.00. 1980: \$ 121.00, 1980 plus 1981: \$ 229.90, postfree

Orders to: Pergamon Press (see above).

NEWS FROM THE ISSS SECRETARIAT AND TREASURY
NOUVELLES DU SÉCRÉTARIAT ET DE LA TRÉSORERIE DE L'AISS
MITTEILUNGEN DES IBG-SEKRETARIATS UND DER
KASSENVERWALTUNG

New Membership List

In the previous issue of the Bulletin (no 55, of June 1979) it was announced that an 'Addendum and Corrigendum' to the 1977 Membership List would be prepared. It appears however that very many changes in address have occurred and also that many new members have joined since the end of 1977 (the total membership is now about 7000). It has therefore been decided to print a completely new Membership List, reflecting the situation at the end of 1979.

It is the intention to dispatch this new List, as well as a booklet with the new ISSS Rules, together with the June 1980 issue of the Bulletin (no 57).

Neue Mitgliederverzeichnis

In der vorigen Ausgabe der Mitteilungen (nr. 55 vom Juni 1979) war angekündigt worden, dass ein 'Addendum und Corrigendum' zur Mitgliederverzeichnis 1977 erarbeitet werden sollte. Es stellte sich jedoch heraus, dass sehr viele Adressenänderungen aufgetreten und auch sehr viele neue Mitglieder hinzugekommen sind seit Ende 1977 (die gesamte Mitgliederzahl beträgt jetzt etwa 7000). Deshalb wurde beschlossen eine ganz neue Mitgliederverzeichnis zu drucken, die die Situation am Jahresende 1979 widerspiegelt.

Wir beabsichtigen, diese neue Liste, wie auch die neuen ISSS-Satzungen, zusammen mit der Juni 1980 Ausgabe der Mitteilungen (nr. 57) zu versenden.

Nouvelle liste de membres

Dans le numéro précédent du Bulletin (no 55, Juin 1979) il y était annoncé qu'un 'Addendum et Corrigendum' à la liste de membres de 1977 serait préparé. Pourtant, il paraît que beaucoup de changements d'adresse ont eu lieu et aussi que beaucoup de nouveaux membres se sont affiliés depuis la fin de 1977 (il y a maintenant environ 7000 membres). *Pour cette raison on a décidé d'imprimer une liste de membres entièrement nouvelle, qui refléchet la situation à la fin de 1979.*

Nous nous proposons d'expédier la nouvelle liste, accompagnée par le nouveau règlement de l'AISS, conjointement avec le numéro de Juin 1980 du Bulletin (no 57).



JMC Backsaver Handle with JMC Sampling Tubes

- No bending over to "pull" cores
- Push tube into ground with foot
- Sample to 116 cm without extensions
- 10 different JMC Sampling tubes

Send Information on JMC Backsaver Handles & sampling tubes



JMC Augers for Soil Investigation

- Alloy steel cutting bits
- Augers for nearly all soil conditions
- Chrome plated for wear and corrosion resistance

Send Information on JMC Augers for Soil Investigation Equipment
Clements Associates Inc.
P.O. Box 398
Grinnell, Ia; USA 50112
(515) 792-8285

NEW

SOIL & TILLAGE RESEARCH

An international journal on research and development in soil tillage and field traffic, and their relationships with soil environment, land use and crop production

Editor-in-Chief

C. van Ouwerkerk, Institute for Soil Fertility, Oosterweg 92, Haren (Gr.), The Netherlands

Scope

Modern-day tillage and harvesting operations, and other field traffic movements, all result in the application of mechanical forces on the soil. The resulting changes in soil structure and weed population may affect growth, but, in addition, may also have implications for subsequent field operations and for the behaviour of the soil under the prevailing weather conditions (trafficability, workability etc.). In order to reduce such effects, much attention is being given nowadays to minimum and zero-tillage systems.

The journal '*Soil & Tillage Research*' has been created as a forum in which papers dealing with all aspects of the interrelationships mentioned above can be collectively published.

The journal is inevitably multidisciplinary and should be of interest to soil scientists, plant scientists, agricultural engineers, agronomists, weed specialists and many others.

Call for Papers

Authors are invited to submit suitable manuscripts, in triplicate, to: Editorial Secretariat, '*Soil & Tillage Research*', P.O. Box 330, 1000 AH Amsterdam, The Netherlands.

Subscription Information

1980 - Volume 1 (in 4 issues) Dfl. 146.00 / US\$ 71.25 (including postage)

A free sample copy is available on request

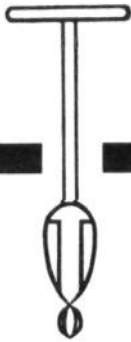


ELSEVIER

P.O. Box 211,
1000 AE Amsterdam
The Netherlands

52 Vanderbilt Ave
New York, N.Y. 10017

The Dutch guilder price is definitive. US \$ prices are subject to exchange rate fluctuations.



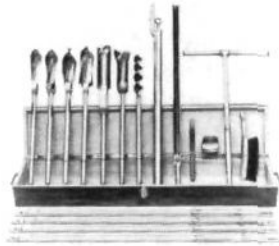
EIJKELKAMP

Equipment for Soil Research B.V. / Apparatuur voor Bodemonderzoek

1 Rivierweg - 6988 BG Lathum - The Netherlands
 Phone: (08336) 1641 - Telex: 35416 Eykel NL
 Telegrams: „Eykelsoil” Lathum

Hand auger equipment.

Hand augers and hand auger sets can be used for taking samples of nearly all kinds of soils, both above and below the ground water level, to depths of about ten meters.

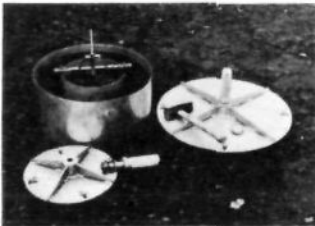


Hand penetrometers.

Various types of hand – operated penetrometers for determination of penetration resistance (also called bearing capacity) of soils.

Soil sample rings and accessories for sampling.

Equipment for taking soil samples with uniform diameter and contents for visual judgement and laboratory research (pF – curves, volume weight measurements, water permeability, pore distribution, ect.)



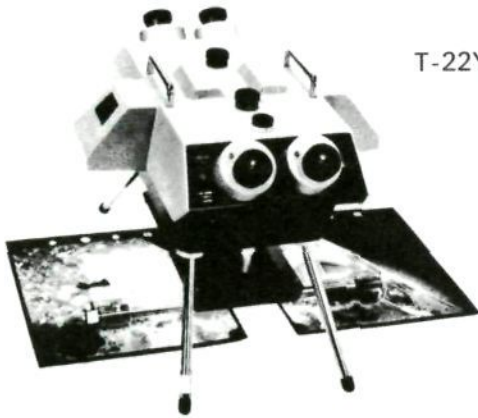
Water permeability / water infiltration equipment.

Meters, kits and other equipment for field and laboratory tests of water permeability of soils.

Request your copy of EIJKELKAMP catalogue on equipment for soil – and soil water research.



USHIKATA SURVEYING INSTRUMENTS
INSTRUMENTS D'ARPENTAGE VERMESSUNGSINSTRUMENTE



T-22Y CONDOR TWIN STEREOSCOPE
Stéréoscope Jumeau Condor
Condor Doppel-Stereoskop

1.5X/3X magnification convertible
Y-parallax adjusting device
Base line : 26cm
Test photo: 23cm x 23cm (max.)

NO.002 O-BAC PLANIMETER
Planimètre O-Bac
O-Bac Planimeter



Linear, roller type w/0-BAC zero resetting device.
Tracer arm setting table in English and Metric



S-25 TRACON SURVEYING COMPASS
Compas d'arpentage Tracon
Tracon Vermessungskompass

Model LS-25 with
Telescope Level is also
available

12X magnification telescope
Horizontal limb w/vernier up to 5
0-BAC for easy zero resetting

Glass Reticle and
Induction Damper for
magnetic needle are
provided.

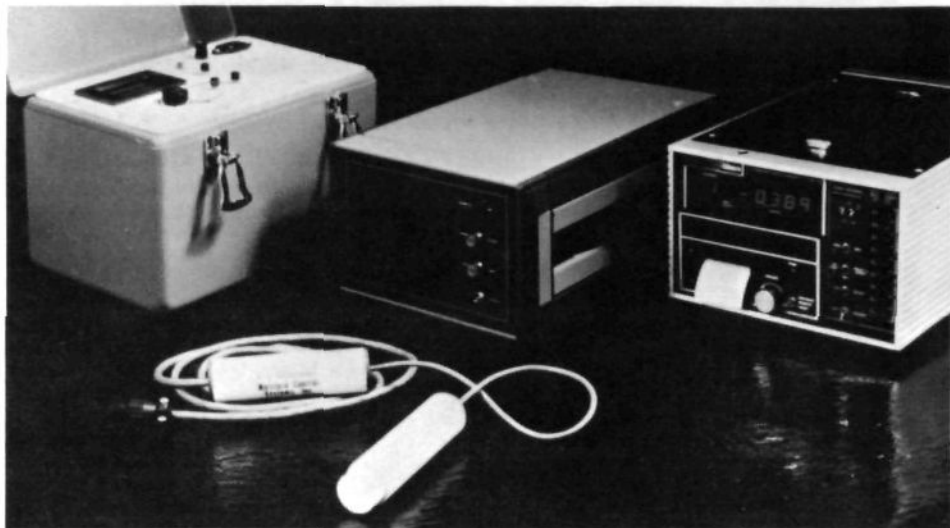
NO.42 PENTO DOUBLE OPTICAL SQUARE
Pento Doppel-Winkelprisma
Quadrant optique double Pento

Precision pentagonal prisms used
Plummet inside the unit body
New 4-step extension metal staff available upon request.



For further information, please contact:

USHIKATA MFG. CO., LTD. 12-7, 2-chome, Chidori, Ota-ku, Tokyo, Japan.



INTRODUCING...PRECISION ELECTRONIC SYSTEMS FOR MEASURING SOIL-WATER MATRIC POTENTIAL

MCS Electronic Soil-Water Matric Potential Measurement Systems are technically advanced instrument systems designed for soil-water research. Applications include agriculture, civil engineering, sports, recreation, grounds maintenance, landscaping and other industries where soil-water research studies are pursued.

The heart of the MCS Systems is an electronic sensor which measures a wide range of the soil matric potential component of the total soil-water potential. Measurements can be displayed for manual reading or recorded automatically by data acquisition systems.

Other features include:

- Factory calibration from -0.1 to -0.6 bars
- Can be calibrated by the user up to -3.0 bars
- Reads automatically every hour
- Comes in a complete system for manual or portable data recording
- Designed to be easily serviceable, but is virtually maintenance free

MCS Electronic Soil-Water Matric Potential Measurement Systems have been extensively field tested for over a year. Individual instruments are lab tested and calibrated for precision and quality. Customer assistance literature as well as personal engineering services are available to help the user design or operate the system.

for more information write or call:

Moisture Control Systems, Inc.
P.O. Box 1047
Findlay, OH 45840
PH: (419) 422-1041

mcs
MOISTURE CONTROL SYSTEMS

NATIONAL SOCIETIES / ASSOCIATIONS NATIONALES / NATIONALGESELLSCHAFTEN

Asociación Argentina de la Ciencia del Suelo

c/o Cervino 3101, 1425 Buenos Aires, Argentina

Australian Society of Soil Science Incorporated

c/o Department of Soil Science, University of Sydney, N.S.W. 2006 Australia

Österreichische Bodenkundliche Gesellschaft

c/o A- 1180 Wien, Gregor Mendel-Strasse 33, Austria

Société Belge de Pédologie – Belgische Bodemkundige Vereniging

c/o Geologisch Instituut, Krijgslaan 271, B-9000 Ghent, Belgium

Sociedade Brasileira de Ciência do Solo

c/o Caixa Postal 28, 13.100 Campinas-S.P., Brasil

Bulgarian Society of Soil Science

c/o Institute of Soil Science 'N. Poushkarov', 5 Shosse Bankya, Sofia 24, Bulgaria

Canadian Society of Soil Science

c/o Suite 907, 151 Slater Street, Ottawa, Ontario K1P 5H4, Canada

Sociedad Chilena de la Ciencia del Suelo

c/o Universidad de Chile, Casilla 1004, Santiago, Chile

Soil Science Society of China

c/o Nanking Institute of Soil Science, Academia Sinica, P.O. Box 821, Nanking, People's Republic of China

Sociedad Colombiana de la Ciencia del Suelo

c/o Apartado Aereo 142, Palmira-Valle, Colombia

Sociedad Costa-ricana de la Ciencia del Suelo

c/o Colegio de Ingenieros Agrónomos, Apartado 281, San José, Costa Rica

Czechoslovak Society of Soil Science

c/o Agricultural University, 160 21 Praha-Suchdol, Czechoslovakia

Dansk Forening for Jordbundsvidenskab

c/o State Laboratory for Soil and Crop Research, 24 Lottenborgvej, DK 2800 Lyngby, Denmark

Soil Science Society of East Africa

c/o ARD/KARI-Muguga, P.O. Box 30148, Nairobi, Kenya

Soil Science Society of Egypt

c/o Soil and Water Research Institute, Ministry of Agriculture, Cairo-Giza, Egypt

Sociedad Ecuatoriana de la Ciencia del Suelo

c/o Predesur, Calle González Suarez 318, Apt. 305, Quito, Ecuador

Finnish Society of Soil Science

c/o Institute of Soil Science, Agricultural Research Centre, Box 18, 01301 Vantaa 30, Finland

Association française pour l'étude du sol

c/o CNRA, route de Saint-Cyr, 78000 Versailles, France

Deutsche Bodenkundliche Gesellschaft

c/o 34 Göttingen, von Sieboldstr. 4, Federal Republic of Germany

Bodenkundliche Gesellschaft der DDR

c/o P.O. Box 1295, 1086 Berlin, German Democratic Republic

Soil Science Society of Ghana

c/o Soil Research Institute, Academy Post Office, Kwadaso-Kumasi, Ghana

Hungarian Soil Science Society

c/o Research Inst. for Soil Science and Agric. Chemistry, H-1022 Budapest 11, Herman O.u. 15, Hungary

Indian Society of Soil Science

c/o Division of Soil Science & Agric. Chemistry, Indian Agric. Research Institute, New Delhi 110012, India

Himpunan Ilmu Tanah Indonesia

c/o Departmen Ilmu Tanah, Universitas Gajah Mada, Yogyakarta, Indonesia

Soil Science Society of Iran

c/o Department of Soil Science, University of Teheran, Karadji, Iran

Soil Science Society of Ireland

c/o Faculty of Agriculture, University College, Belfield, Dublin 4, Ireland

Israel Society of Soil Science

c/o Institute of Soils and Water, Volcani Center, P.O. Box 6, Bet Dagan, Israel 50-200.

Società Italiana della Scienza del Suolo

c/o Istituto di Microbiologia Agraria e Tecnica, Piazzale delle Cascine 27, 50144 Florence, Italy

The Society of the Science of Soil and Manure, Japan

c/o 26-10-202, Hongo 6 chome, Bunkyo-ku, Tokyo 113, Japan

Korean Society of Soil Science and Fertilizers

c/o Institute of Agricultural Sciences, Suweon 170, Korea

Persatuan Sains Tanah Malaysia

c/o P.O. Box 2644, Kuala Lumpur, Malaysia

Association Marocaine des Sciences du Sol

c/o P.O. Box 4102, Rabat Tour-Hassan, Morocco

Sociedad Mexicana de la Ciencia del Suelo

c/o Apartado Postal No. 45, Chapingo, Edo. de Mex, Mexico D.F., Mexico

Nederlandse Bodemkundige Vereniging

c/o Staringgebouw, Marijkeweg 11, Wageningen, The Netherlands

New Zealand Society of Soil Science

c/o Soil Bureau, DSIR, Private Bag, Lower Hutt, New Zealand

Soil Science Society of Nigeria

c/o Department of Soil Science, University of Nigeria, Nsukka, Nigeria

Norsk Forening for Jordforskning

c/o Box 72, N-1432 As-NLH, Norway

Soil Science Society of the Philippines

c/o Bureau of Soils, Ma. Y. Orosa Street, Ermita, Manila, Philippines

Polskie Towarzystwo Gleboznawcze

c/o UL. Wisniowa 61, 02-520 Warszawa, Poland

Sociedade Portuguesa da Ciência do Solo

c/o Instituto Superior de Agronomia, Tapada de Ajuda, 1399 Lisboa Codex, Portugal.

Societatea Nationala Romana Pentru Stiinta Solului

c/o Bucuresti 1, Bd. Marasti 61, 71331, Romania

Soil Science Society of Southern Africa

c/o P.O. Box 1821, Pretoria 0001, Republic of South Africa.

Sociedad Espanola de Ciencia del Suelo

c/o Instituto de Edafologia y Biologia Vegetal, CSIC, Serrano 115 Dpd ±, Madrid-6, Spain

Soil Science Society of Sri Lanka

c/o Dept. of Agricultural Chemistry, Faculty of Agriculture, Peradeniya, Sri Lanka

Swedish Society of Soil Science

c/o Department of Soil Sciences, S-750 07 Uppsala, Sweden

Bodenkundliche Gesellschaft der Schweiz – Société Suisse de Pédologie

c/o Eidg. Forschungsanstalt f. landwirtschaftlichen Pflanzenbau, 8064 Zürich-Reckenholz, Switzerland

Association Tunisienne de la Science du Sol

c/o Division des Sols, Avenue de la République, Tunis-Port, Tunisia

British Society of Soil Science

c/o University of Nottingham, School of Agriculture, Sutton Bonington, Loughborough, Leics. LE 12 5RD, U.K.

Soil Science Society of America

c/o 677 South Segoe Road, Madison, Winconsin 53711, USA

All-Union Society of Soil Scientists of the USSR

c/o Pygevsky per.7, 109017 Moscow-17, USSR

Sociedad Venezolana de la Ciencia del Suelo

c/o Apartado 1208 (Sta Rosa), Maracay, Venezuela

Jugoslovensko Društvo za Proučavanje Zemljišta

c/o Institute of Agrochemistry and Soil Science, Belgrade, Yugoslavia

Subcommissions/Sous-Commissions/Subkommissionen - Chairmen/Présidents/Vorsitzenden

- A. Salt affected soils/Sols salins/Salzböden**
Prof. Dr. I. Szabolcs, Director, Research Institute for Soil Science, Hermann Ottó út 15, Budapest 11, Hungary
- B. Micromorphology/Micromorphologie/Mikromorphologie**
Dr. P. Bullock, Rothamsted Experimental Station, Harpenden Herts, AL5-27Q, U.K.

Working Groups/ Groupes de Travail/ Arbeitsgruppen - Chairmen/Présidents/ Vorsitzenden

- SC Soil Conditioning/Stabilisation de la structure du sol/Bodenstrukturverbesserung** (Com. I).
Prof. Dr. M. F. Boodt, State Agricultural University, R.U.G., Coupure Links 533, B-9000 Ghent, Belgium.
- HS Humic Substances ('Humic Acid Reference Collection')/Matériaux humiques/Humusbestandteile** (Com. II). Dr. P. Mac Carthy, Department of Chemistry and Geochemistry, Colorado School of Mines, Golden, CO80401, U.S.A.
- FT Soil Fertility/Fertilité des sols/Bodenfruchtbarkeit** (Com. IV).
Dr. P. Bruin, Retired Director, Institute for Soil Fertility, P.O. Box 30003, 9750 RA Haren, The Netherlands.
(Subgroups: Quality of Crops; Yield Analysis; Nitrogen Mineralisation-Nitrogen Balance).
- CS Cryogenic Soils/Sols cryogènes/kryogene Böden** (Com. V).
Prof. Dr. O. V. Makeev, Institute of Agrochemistry and Soil Science, Abon. Box 21, Puschino, Moscow Region 142292, U.S.S.R.
- DP Soil Information Systems/Informatique en pédologie/Informationssysteme in der Bodenkunde** (Com. V).
Dr. J. Schelling, Netherlands Soil Survey Institute, P.O. Box 98, 6700 AB Wageningen, The Netherlands.
- DS Desertification/Désertification/Verwüstung** (Com. V).
Dr. D. R. Bumbala, c/o Ministry of Agriculture and Irrigation, Department of Agriculture, Krishi Bhavan, New Dehli 110001, India.
- FS Forest Soils/Sols forestiers/Waldböden** (Com. V).
Dr. R. Saly, Visoka Skola Lesnika, Zvolen, Czechoslovakia.
- NO Nomenclature Hydromorphic Soils/Nomenclature des sols hydromorphes/Nomenklatur hydromorphen Böden** (Com. V).
Prof. Dr. E. Schlichting, Institut für Bodenkunde und Standortlehre, Universität Hohenheim, P.O. Box 106, D-7000 Stuttgart-70, B.R.D.
- PP Paleopedology/Paléopédologie/Paläopedologie** (Com. V; with/avec/mit INQUA).
Prof. Dr. D. H. Yaalon, Department of Geology, Hebrew University, Jerusalem 91000, Israel.
(subgroups: Origin and Nature of Paleosols; Soil Stratigraphy; Dating of Paleosols; Applied Paleopedology).
- RS Remote Sensing for Soil Surveys/Pédologie et Télédétection/Fernerkundung für Bodenkartographie** (Com. V).
Prof. Dr. M. C. Girard, Institut National Agronomique, 78850 Thivernal, Grignon, France.
- LE Land Evaluation/Evaluation des terres/Landbewertung** (Com. VI).
Dr. K. J. Beek, ILRI, P.O. Box 45, 6700 AA Wageningen, The Netherlands.
- CO* Soil Colloid Surfaces/Surfaces des colloïdes de sol/Bodencolloidale Oberfläche** (Com. VII).
Prof. Dr. Quirk, Waite Agricultural Research Institute, University of Adelaide, Private Bag, Glen Osmond, SA 5064 Australia.

Committee on Rules

Prof. Dr. E. G. Hallsworth (Chairman: University of Sussex, Falmer, Brighton, Sussex BN1 9RF, England); Prof. Dr. P. Buringh, Dr. R. Dudal, Prof. Dr. I. P. Garbouchev; Prof. Dr. E. Schlichting; Prof. Dr. R. Tavernier (Members); Dr. W. G. Sombroek (Secretary: P.O. Box 353, Wageningen 6700 AJ, the Netherlands).

* Provisional status, with a 'Steering Committee', till next Congress/Etat provisoire, avec un 'Comité Dirigeant', jusqu'au prochain Congrès/vorläufiger Status, mit einem 'Lenkungsausschuss', bis zum nächsten Kongress.

ISSS MEMBERSHIP

Membership of the International Society of Soil Science is open to all persons and institutions engaged in the study and the application of soil science. Membership applications can be addressed to the National Societies or directly to the Secretariat General. For individual memberships, the yearly subscription, due each January, is 5 US dollars, or equivalent in any other convertible currency. The fee for corporate members is 25 US dollars per year. Voluntary contributions by sponsors of the Society will be highly appreciated and acknowledged in the Bulletin. Individual payments can be made by cheque, by international money order or by direct transfer into the ISSS bank account. Unesco coupons are also accepted. In order to reduce bank charges it is recommended that subscriptions be remitted, whenever possible, through medium of the National Societies (for their addresses see Bulletin no 56). Non-membership subscriptions to the Bulletin, by Library Services etc., are US\$ 6.- yearly.

Account: D. Gabriels, International Society of Soil Science, University Gent 390.0440957.50, Bank Brussel Lambert, Martelaarslaan, B-9000 Gent, Belgium.

ADHESION A L'AISS

Toutes personnes et institutions engagées dans l'étude et l'application de la science du sol peuvent adhérer à l'Association internationale de la science du sol. Les demandes d'inscription peuvent être faites par l'intermédiaire des associations nationales ou adressées directement au Secrétariat général. La souscription individuelle, due au mois de janvier, est de 5 dollars E.U. par an ou son équivalent dans une autre monnaie convertible. La souscription pour les institutions s'élève à 25 dollars E.U. par an. Des contributions volontaires, qui permettraient de promouvoir l'Association, seront les bienvenues et mention en sera faite dans le Bulletin. Les versements individuels peuvent être faits au moyen d'un chèque, d'un mandat international ou par transfert direct au compte en banque de l'Association. Des coupons Unesco peuvent également être utilisés. En vue de réduire les frais de banque il est recommandé, dans la mesure du possible, de faire parvenir les souscriptions par l'intermédiaire des associations nationales (pour leurs adresses voir Bulletin no 56). Abonnements au Bulletin sans adhésion, du part de services de bibliothèques etc., sont de 6 dollars E.U. par an.

Compte: D. Gabriels, International Society of Soil Science, University Gent, 390.0440957.50, Bank Brussel Lambert, Martelaarslaan, B-9000 Gent, Belgique.

IBG-MITGLIEDSCHAFT

Die Internationale Bodenkundliche Gesellschaft heisst Personen und Institute, die auf dem Gebiet der Forschung und Anwendung der Bodenkunde arbeiten, als Mitglieder willkommen. Aufnahmeanträge können direkt an das Generalsekretariat der Gesellschaft geschickt oder über die nationalen bodenkundlichen Gesellschaften an dieses geleitet werden. Der Einzelmitgliedsbeitrag, der jeweils im Januar zu entrichten ist, beträgt jährlich 5 US-Dollar oder den Gegenwert in einer konvertierbaren Währung. Der jährliche Mitgliedsbeitrag für Institute beträgt 25 US-Dollar.

Freiwillige Beiträge, die eine Förderung der IBG erlauben würden, werden sehr geschätzt und in den IBG-Mitteilungen bestätigt. Einzelzahlungen können durch Scheck, internationale Postanweisungen oder direkt auf das Konto der Gesellschaft erfolgen. Unesco-Kupons werden auch akzeptiert. Um die Bankkosten niedrig zu halten, sollten Beiträge wo möglich durch die nationalen Gesellschaften gezahlt werden (für ihren Anschriften siehe Mitteilungen no 56). Abonnemente auf die Mitteilungen ohne Mitgliedschaft, für Bibliotheken u.s.w., sind US\$ 6.- jährlich.

Konto: D. Gabriels, International Society of Soil Science, University Gent, 390.0440957.50, Bank Brussel Lambert, Martelaarslaan, B-9000 Gent, Belgien.