No. 40 1972

BULLETIN

OF THE INTERNATIONAL SOCIETY
OF SOIL SCIENCE

•

BULLETIN

DE L'ASSOCIATION INTERNATIONALE
DE LA SCIENCE DU SOL

MITTEILUNGEN

DER INTERNATIONALEN BODENKUNDLICHEN
GESELLSCHAFT

•

DRUKKERIJ SYSTEMA B.V. — AMSTERDAM (HOLLAND)

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

Office/Bureau: c/o Royal Tropical Institute, 63 Mauritskade, Amsterdam, Netherlands.

COUNCIL/CONSEIL/BEIRAT:

Executive Committee/Comité Exécutive/Verwaltungsausschuss:

President	:	V. A. Kovda, Sub-Faculty of Pedology, Moscow State University, Moscow V-234.
Vice-President	:	I. P. Guerasimov, Geography Institute of the Academy of Sciences of the USSR, Staromometni 29, Moscow.
Past-President	:	E. G. Hallsworth, C.S.I.R.O. Division of Soils, Private Bag No. 1, Glen Osmond, South Australia.
Secretary-General	:	F. A. van Baren, c/o Royal Tropical Institute, 63 Mauritskade, Amsterdam, Netherlands.

Honorary Members/Membres Honoraires/Ehrenmitglieder:

Prof. F. Hardy, C.B.E., M.A., Dip. Agric. (Cantab), Bel Air, Circular Road, St. Augustine, Trinidad.
Prof. Dr Sante Mattson, Båstad, Sweden.
Prof. L. A. Prescott, 82 Cross Road, Myrthle Bank, South Australia.
Dr L. A. Richards, 4455 Fifth Street, Riverside, Cal., U.S.A.
Prof. Dr A. A. Rode, Dokuchaev Soil Institute, Pygevski per. 7, Moscow 17, USSR.
Prof. Dr Emil Truog, University of Wisconsin, Madison, Wis. 53706, U.S.A.

Commissions/Commissions/Kommissionen:

I — SOIL PHYSICS.
Chairman: W. R. Gardner, Department of Soil and Water Science, University of Wisconsin, Madison, Wisc. 53706, U.S.A.

II — SOIL CHEMISTRY.
Chairman: H. Laudelout, Institut Agronomique, Héverlé, Belgium.

III — SOIL BIOLOGY.
Chairman: G. Fahreaus, Microbiologiska Institutionen, Uppsala 7, Sweden.

IV — SOIL FERTILITY AND PLANT NUTRITION.
Chairman: O. T. Rotini, Facoltà di Chimica Agraria dell' Università degli Studi, Via S. Michele degli Scalzi 2, Pisa, Italy.

V — SOIL GENESIS, CLASSIFICATION AND CARTOGRAPHY.
Chairman: R. Dudal, World Soil Resources Office, F.A.O., Via delle Terme Caracalla, Roma, Italy.

VI — SOIL TECHNOLOGY.
Chairman: T. J. Marshall, C.S.I.R.O., Division of Soils, Private Mail Bag 1, Glen Osmond, S.A., Australia.

VII — SOIL MINERALOGY.
Chairman: K. Norrish, C.S.I.R.O., Division of Soils, Private Mail Bag 1, Glen Osmond, S.A., Australia.

BULLETIN

OF THE INTERNATIONAL SOCIETY OF SOIL SCIENCE

BULLETIN

DE L'ASSOCIATION INTERNATIONALE DE LA SCIENCE DU SOL

MITTEILUNGEN

DER INTERNATIONALEN BODENKUNDLICHEN GESELLSCHAFT

No. 40 1972

NEWS OF THE SOCIETY

The 10th International Congress of Soil Science
Moscow, August 12 - 20, 1974
Second circular

I. *Arrangements for presentation of papers*

The papers accepted by the Organizing Committee will be published as the Proceedings of the Congress and handed over to the Delegates prior to the beginning of the Congress. The Organizing Committee requests the authors of the papers to adhere to the following recommendations:

a. The contents of the papers should be relevant to one of the problems enumerated in the Congress programme (see ISSS Bulletin, No. 38 and Journ. Pochvovedenie, No. 3, 1971);
b. The papers should contain new, original, previously unpublished material;
c. The papers should be presented in one of the working languages of the Congress (Russian, English, French, German) with a summary in three other working languages. On request of the authors the Organizing Committee can arrange translation of the summary into Russian;
d. Papers should not exceed 6 double-spaced, type-written pages (2 000 words), including tables, figures and graphs, the size of the summary - 100 words;
e. The papers must be sent to the address of the Organizing Committee no later than the 1st of September, 1972;
f. The Organizing Committee reserves the right to select and edit the papers. The authors will be informed before 1st February 1973 whether their papers are accepted and included in the programme of sessions of the Congress.

II. *The topics of symposia included in the Congress programme*

1. World Soil Map.
2. Nitrogen in soil formation and agricultural farming.
3. The changes in the soils under the effect of amelioration.
4. Systems of soil-protecting farming.

III. *Registration fee*

The registration fee, including the cost of 1 copy of Congress Proceedings, is $ US 60 (54 roubles) for the participants of the Congress and $ US 15 (13 roubles 50 copecks) for every accompanying person.

IV. *Excursions*

Post-Congress excursions will be organized for the participants to various soil-geographic regions of the USSR. The excursion members will get familiar

with the most widespread soils in the USSR as well as with the systems of land utilization, soil and agricultural establishments, experiment stations, collective and state farms.

Tour 1. (Moscow - Kharkov - Yalta - Moscow)

This route runs through the main soil-geographical zones of the southern part of the Russian Plain. The following soils will be shown; grey forest soils; typical ordinary and southern chernozems; dark chestnut soils; brown forest and cinnamonic soils of the Mountainous Crimea. Those participating the excursion will get acquainted with the methods and results of the long-term observations on the dynamics of soil forming processes.

Duration of the excursion - 10 days.

Approximate cost: 220 roubles.

Tour 2. (Moscow - Vladimir - Suzdal - Leningrad - Siktivkar - Moscow)

The route passes within the podzolic soils zone in the northern part of the Russian Plain. There will be shown: soddy-podzolic, podzolic, boggy-podzolic soils as well as the humus-illuvial podzols. Members of the excursion will get familiar with the methods and results of observations on the dynamics of the soil forming processes.

Duration of the excursion: 10 - 11 days.

Approximate cost: 140 - 260 roubles.

Tour 3. (Moscow - Sukhumi - Tbilisi - Moscow)

This route proceeds through the subtropical regions of the Transcaucasian Union-Republics. Those participating in this excursion will examine krasnozems, zheltozems, podzolized zheltozems, subtropical podzols, brown forest, cinnamonic and grey-cinnamonic soils. They will visit farms growing subtropical crops.

Duration of the main excursion - 6 days, each of the additional excursions (Tbilisi-Yerevan or Tbilisi-Baku) will last about 3 - 4 days.

Approximate cost of the main excursion is 170 roubles and that of an additional one: 100 roubles.

Tour 4. (Moscow - Tashkent - Samarkand - Bukhara - Moscow)

The route crosses desert and mountainous regions of the Middle Asiatic Union Republics. There will be shown sierozems, desertic grey-brown soils, takyrs, meadow soils, solonchaks, mountain cinnamonic soils, and other mountain forest soils, irrigated soils of oases and sand massives.

Duration of the excursion: 10 days.

Approximate cost: 300 roubles.

Tour 5. (Moscow - Novosibirsk - Moscow and tours from Novosibirsk)

The route will lie in the southern part of the Western-Siberian Plain. Those taking part in the excursion will examine leached, typical and solonetzic chernozems, meadow-chernozemic soils, solonetzes, sodic solonchaks, solods as well as certain mountain soils of Southern Siberia. They will familiarize themselves with the methods and results of long term observations on soil complexes and with the methods employed for their reclamation.

Duration of the excursion: 10 days.

Approximate cost: 300 roubles.

A more detailed description of the excursion routes as well as accurate cost of the tours will be published in the next issues of the Bulletin.

The Organizing Committee of the
10th International Congress of Soil Science,

Moscow State University
Sub-section of Pedology
Moscow-117234, UdSSR.

Signed V. Kovda

Report of the Working Committee on the Organization of future Congresses

The Committee which includes Dr. G. H. Bolt (Netherlands), Dr. J. P. Gerassimov (USSR), Dr. M. L. Jackson (USA), Dr. T. J. Marshall (Australia), Mr. P. H. Nye (UK) and Dr. E. Schlichting (Germany) recommends:

1. *Relation between Congresses and Commission Meetings*

To secure appreciation and make proper use of the expanding work done in Soil Science more international contact is needed. In view of the increasing costs and the complexity of Congresses this should be achieved by emphasizing Commission meetings rather than Congresses. We therefore recommend:

(i) that Congresses shall be convened at regular intervals whenever possible, preferably every four years (cf. rules D 3);

(ii) that separate or joint meetings of Commissions should be organized between Congresses (cf. rules I 7).

Rule D 3 reads: *„The Congress shall be convened not less than once in every four years."*

Rule I 7 reads: *"Commissions may, with the approval of the Council, hold special meetings between the Congresses."*

2. *General orientation of Congresses*

Progress in Soil Science depends equally on the development of methods (e.g. in Soil Physics, Chemistry, Biology and Mineralogy), and on their better use in solving problems (e.g. in Soil Fertility, Genesis and Technology). Development of methods would be stimulated by joint meetings of Commissions with related disciplines (e.g. Geo-physics, Clay Mineralogy). This would make it easier to keep a balance at the Congresses between separate sessions of the Commissions and problem-oriented joint sessions or more general symposia. We therefore recommend:

(i) that Commissions should plan joint meetings with other disciplines;

(ii) that at Congresses there should be up to 5 invited papers on special topics of general interest. Among the ordinary papers, which should be limited to 400, preference, up to $^2/_3$ of the papers accepted, should be given to those devoted to certain themes selected by the host country in co-operation with the Commissions. The remainder should be left free in order to allow the presentation of new developments in Soil Science regardless of the nature of the particular topic. To maintain a high standard of the papers the selection board of the host country should according to need be supported by the Commissions.

3. *Presentation and Documentation of the Contributions*
The Committee was evenly divided in a preference for:

a. pre-printed papers available before the Congresses plus a post-Congress volume summarizing the discussions;

b. mimeographed abstracts available before the Congress, and post-Congress volumes containing the papers and the discussions.

The choice will depend very much on the circumstances of the host country. We therefore recommend that:

The general arrangements for the Congress shall be made by the Organizing Committee of the host country. This Committee shall inform the Congress members in a suitable way and in time about the content of the accepted papers and shall be responsible for publishing the Transactions of the Congress (cf. rules D 4).

Rule D 4 reads: *"The general arrangements for the Congress shall be made by the Organizing Committee of the host country. This Committee is also responsible for publishing the Transactions of the Congress."*

NOUVELLES DE L'ASSOCIATION

Le 10e Congres International de la Science du Sol
Moscou, 12 - 20 août 1974
Seconde circulaire

I. *Dispositions concernant la présentation des communications*

Les communications acceptées par le Comité Organisateur seront publiées de même que les Comptes Rendus du Congrès et remises aux délégués avant que ne commence le Congrès. Le Comité Organisateur demande aux auteurs de communications de se conformer aux recommandations suivantes:

a. la teneur des communications doit correspondre à l'un des problèmes énumérés dans le programme du Congrès (voir Bulletin no. 38 de l'AISS et le Journal Pochvovedenie no. 3 de 1971);
b. les communications doivent être originales et n'avoir jamais été publiées;
c. les communications doivent être présentées dans les langues de travail du Congrès (russe, anglais, français, allemand) avec un résumé dans les trois autres langues. Sur demande des auteurs, le Comité Organisateur peut se charger de la traduction en russe du résumé;
d. les communications ne peuvent dépasser 6 pages dactylographiées avec double interligne (2000 mots) y compris les tableaux, figures et graphiques. Le résumé ne peut dépasser 100 mots;
e. Le texte des communications doit être envoyé á l'adresse du Comité Organisateur avant le 1er septembre 1972;
f. Le Comité Organisateur se réserve le droit de sélectionner et d'éditer les communications. Les auteurs seront informés avant le 1er février 1973 de l'acceptation de leur communication et par conséquent de leur insertion dans le programme des sessions du Congrès.

II. *Thèmes des symposiums inclus dans le programme du Congrès*

1. Carte mondiale des sols
2. L'azote dans la formation des sols et en agriculture
3. Changements dans les sols sous l'effet de l'amélioration
4. Systèmes d'agriculture de protection du sol

III. *Frais d'inscription*

Les frais d'inscription comprenant le prix d'un exemplaire des comptes rendus du Congrès est de $ US 60 (24 roubles) pour les participants au Congrès et de $ US 15 (13 roubles 50 copecks) pour toute personne accompagnant un participant.

IV. *Excursions*

Des excursions seront organisées après le Congrès pour les participants dans différents régions pédo-géographiques de l'URSS. Les membres pourront se familiariser avec les sols les plus répandus en URSS ainsi qu'avec les systèmes d'utilisation des sols, les stations de recherches pédologiques et agricoles, les réserves naturelles et les stations expérimentales, les fermes collectives et d'Etat.

Excursion 1. (Moscou - Kharkov - Yalta - Moscou)

Cet itinéraire traverse les principales zones pédo-géographiques de la partie sud de la Plaine russe. Les sols suivants seront observés: sols gris forestiers; chernozems typiques, ordinaires et méridionaux; sols châtain foncé; sols bruns forestiers et sols cannelle de la Crimée montagneuse. Les participants à cette excursion pourront apprécier les méthodes et les résultats des observations de longue durée faites sur les chernozems.

Durée de l'excursion: 10 jours

Prix approximatif: 220 roubles

Excursion 2. (Moscou - Vladimir - Léningrad - Siktivkar - Moscou)

L'itinéraire traverse la zone des sols podzoliques de la partie nord de la Plaine russe. On pourra observer les sols podzoliques de pelouse, les sols podzoliques, les

sols podzoliques marécageux ainsi que les podzols humiques. Les participants pourront voir les méthodes et résultats des observations faites sur sols podzoliques.

Durée de l'excursion: 10 - 11 jours

Prix approximatif: 140 - 260 roubles

Excursion 3. (Moscou - Sukhumi - Tbilisi - Moscou)

L'itinéraire traverse les régions subtropicales de l'Union des Républiques transcaucasiennes. Les participants verront des krasnozems, des zheltozems, des zheltozems podzoliques, des podzols subtropicaux, des sols bruns forestiers, des sols cannelle et des sols gris cannelle. Ils visiteront des exploitations de cultures subtropicales.

Durée de l'excursion principale - 6 jours, chacune des excursions supplémentaires (Tbilisi - Yerevan ou Tbilisi - Baku) durera 3 ou 4 jours.

Prix approximatif de l'excursion principale 170 roubles. Excursion supplémentaire 100 roubles.

Excursion 4. (Moscou - Tashkent - Samarkand - Bukhara - Moscou)

L'itinéraire traverse les régions désertiques et montagneuses de l'Union des Républiques d'Asie centrale. On pourra voir des sierozems, des sols gris brun désertiques, des takyrs, des sols de prairie, des solonchaks, des sols cannelle de montagne et d'autres sols forestiers de montagnes, des sols irrigués d'oasis et de plages sableuses.

Durée de l'excursion: 10 jours

Prix approximatif: 320 roubles

Excursion 5. (Moscou - Novosibirsk - Moscou et tours partant de Novosibirsk)

L'itinéraire traverse la partie sud de la plaine sibérienne occidentale. Les participants pourront voir des chernozems lessivés, typiques et solonetziques, des sols chernozemiques de prairie, des solonetz, des solonchaks sodiques, des solods ainsi que certains sols de montagne de Sibérie du sud. Ils pourront se familiariser avec les méthodes et les résultats d'observation faits sur des complexes de sols et avec les méthodes employées pour les améliorer.

Durée de l'excursion: 10 jours

Prix approximatif; 300 roubles

Une description plus détaillée des itinéraires ainsi que les prix exacts des excursions seront donnés dans les numéros suivants du Bulletin.

Le Comité Organisateur du 10e Congrès International de la Science du Sol

Moscow State University
Sub-section of Pedology
Moscow-117234, URSS.

Signé V. Kovda

Rapport du Comité de Travail sur l'organisation des futurs Congrès

Le Comité qui comprend le Dr. G. H. Bolt (Hollande), le Dr. J. P. Gerassimov (URSS), le Dr. M. L. Jackson (USA), le Dr. T. J. Marshall (Australie), Mr. P. H. Nye (GB) et le Dr. E. Schlichting (Allemagne) recommande:

1. *Relation entre les Congrès et les réunions de Commissions*

Pour pouvoir mieux apprécier et utiliser les nombreux travaux faits en science du sol, il est nécessaire qu'il ait des contacts internationaux. Puisque les frais et la complexité des Congrès sont croissants, il serait préférable que les réunions de Commissions soient amplifiées plus tôt que les Congrès. C'est pourquoi nous recommandons:

(i) que les Congrès se réunissent à des intervalles aussi réguliers que possible, de préférence tous les 4 ans (voir Règlement D 3)

(ii) que des réunions séparées ou conjointes de Commissions soient organisées entre les Congrès (voir Règlement I 7)

Le Règlement D 3 dit: *"Le Congrès aura lieu au moins tous les 4 ans".*

Le Règlement I 7 dit: *"Les Commissions peuvent, avec l'approbation du Conseil, tenir des assemblées spéciales entre les Congrès".*

2. *Orientation générale des Congrès*

Les progrès en science du sol dépendent et du développement des méthodes (par ex. en physique, chimie, biologie et minéralogie du sol) et de leur utilisation la plus judicieuse pour résoudre des problèmes (par ex. en fertilité, génèse et technologie du sol). Le développement de méthodes serait stimulé par des réunions conjointes de Commissions ayant des relations interdisciplinaires (par ex. géophysique, minéralogie des argiles). Ce serait ainsi plus facile d'équilibrer au cours des Congrès des sessions séparées de Commissions ou des sessions conjointes à problèmes orientés ou encore des symposiums plus généraux. C'est pourquoi nous recommandons:

(i) que les Commissions prévoient de réunions communes interdisciplinaires;

(ii) qu'au cours des Congrès on puisse proposer au moins 5 communications sur des thèmes spéciaux d'intérêt général. Que, en plus des communications ordinaires qui devraient être limitées à 400, la préférence soit donnée, pour au moins les $^2/_3$ des communications aux textes qui sont centrés sur certains thèmes choisis par le pays invitant en coopération avec les Commissions. Le restant libre de façon a permettre la présentation de nouvelles connaissances en science du sol en fonction de la nature d'un thème particulier. Pour maintenir un haut standing des communications, le bureau du pays invitant chargé de la sélection pourrait être aidé si nécessaire par les Commissions.

3. *Présentation et documentation des contributions*

Le Comité est divisé pour donner la préférence à:

a. *la pré-impression des communications de manière qu'elles soient disponibles* avant le Congrès et l'impression après le Congrès d'un volume résumant les discussions;

b. l'impression provisoire des résumés avant le Congrès et l'impression après le Congrès de volumes contenant les communications et les discussions.
Le choix dépendra principalement des circonstances dans le pays invitant. C'est pourquoi nous recommandons que:

Les principaux préparatifs pour le Congrès soient exécutés par le Comité Organisateur du pays invitant. Ce Comité informera les membres du Congrès par la voie appropriée et en temps utile du contenu des communications acceptées et sera responsable de la publication des Comptes Rendus du Congrès (voir Règlement D 4).

Le Règlement D 4 dit: *"Les principaux préparatifs du Congrès seront exécutés par le Comité Organisateur du pays invitant. Ce Comité se charge de la publication des Comptes Rendus du Congrès."*

NEUES AUS DER GESELLSCHAFT

10. Internationaler Bodenkundlicher Kongreß von 12. - 20. August 1974 in Moskau
Zweites Rundschreiben

I. *Vorbereitungen zur Vorlage von Vorträgen*

Die an das Organisations-Komitee gesandten Vorträge werden als Tagungsbeiträge für den Kongreß veröffentlicht und den Delegierten vor Beginn des Kongresses übergeben. Das Organisations-Komitee bittet die Autoren der Vorträge, sich an folgende Regelung zu halten:

a. Der Inhalt der Vorträge sollte zu einem der in dem Kongreß-Programm genannten Thema Beziehung haben (siehe ISSS-Bulletin, Nr. 38, und Zeitschrift „Pochvovedenie, Nr. 3, 1971);
b. Die Vorträge sollten neues, erkenntnisreiches, noch unveröffentlichtes Material enthalten;
c. Die Vorträge sollten in einer der Kongreß-Sprachen vorgelegt werden (russisch, englisch, französisch, deutsch) mit einer Zusammenfassung in drei anderen Sprachen. Auf Wunsch der Autoren kann das Organisations-Komitee die Übersetzung der Zusammenfassung ins Russische übernehmen;
d. Die Vorträge sollten 6 doppelspaltige Schreibmaschinenseiten (2000 Worte) einschließlich Tabellen, Abbildungen und graphische Darstellungen nicht überschreiten, der Umfang der Zusammenfassung soll 100 Worte sein;
e. Die Vorträge müssen bis zum 1. September 1972 an das Organisations-Komitee gesandt werden;
f. Das Organisations-Komitee behält sich das Recht vor, die Vorträge auszuwählen und zu veröffentlichen. Die Autoren werden bis zum 1. Februar 1973 darüber informiert, ob ihre Vorträge angenommen und in das Programm der einzelnen Sitzungen des Kongresses aufgenommen wurden.

II. *Die in das Kongreß-Programm aufgenommen Themen der Symposien*

1. Weltbodenkarte
2. Stickstoff in der Bodenentwicklung und im landwirtschaftlichen Pflanzenbau
3. Die Veränderung in den Böden unter Einwirkung der Melioration
4. Systeme des Bodennutzungsgeschutzes

III. *Anmeldegebühren*

Die Anmeldegebühren, die die Kosten für eine Kopie der Kongreß-Beiträge einschließen, belaufen sich auf 60 US-Dollar (54 Rubel) für die Teilnehmer des Kongresses und 15 US-Dollar (13 Rubel, 50 Kopeken) für jede Begleitperson.

IV. *Exkursionen*

Exkursionen nach dem Kongreß werden für die Teilnehmer in verschiedenen bodengeographischen Gebieten der UdSSR organisiert. Die Exkursionsteilnehmer *werden mit den weitverbreitetsten Böden in der UdSSR vertraut gemacht, ebenso* mit dem System der Landnutzung, mit bodenkundlichen und landwirtschaftlichen Forschungseinrichtungen, Reservaten und Versuchsstationen, Kollektiv- und Staatsfarmen.

Exkursion 1. Moskau - Charkov - Yalta - Moskau)

Die erste Exkursion führt durch die wichtigsten bodengeographischen Zonen des südlichen Teils der russischen Ebene. Folgende Böden werden vorgeführt: graue Waldböden; typische, gewöhnliche und südliche Tschernoseme; dunkelkastanienfarbige Böden; braune Waldböden und zimtfarbene Böden der gebirgigen Krim. Diejenigen, die an dieser Exkursion teilnehmen, werden mit den Methoden und Ergebnissen langjähriger, stationärer Beobachtungen an Tschernosemen vertraut gemacht.

Dauer der Exkursion 10 Tage

Ungefähre Unkosten 220 Rubel

Exkursion 2. (Moskau - Vladimir - Suzdal - Leningrad - Siktivkar - Moskau)

Die Exkursion wird innerhalb der Zone podsoliger Böden im nördlichen Teil der russischen Ebene geführt. Folgende Böden werden demonstriert: rasen-podsolige, podsolige und anmoorig-podsolige Böden sowie die Humus-Illuvial-Podsole. Die Exkursionsteilnehmer werden mit den Methoden und Ergebnissen stationärer Beobachtungen an podsoligen Böden vertraut gemacht.

Dauer der Exkursion 10 - 11 Tage

Ungefähre Unkosten 140 - 260 Rubel

Exkursion 3. (Moskau - Sukhumi - Tbilisi - Moskau)

Diese Route führt durch die subtropischen Gebiete der Transkaukasischen Unions-Republiken. Diejenigen, die an dieser Exkursion teilnehmen, haben Gelegenheit, Krasnoseme, Jeltoseme, podsolierte Jeltoseme, subtropische Podsole, braune Waldböden, zimtfarbene und grau-zimtfarbene Böden kennenzulernen. Sie werden Farmen besichtigen können, auf denen subtropische Kulturpflanzen angebaut werden.

Dauer der Hauptexkursion 6 Tage, jede der zusätzlichen Exkursionen (Tbilisi - Yerevan oder Tbilisi - Baku) wird ungefähr 3 - 4 Tage in Anspruch nehmen.

Ungefähre Unkosten der Hauptexkursion betragen 170 Rubel und die einer zusätzlichen Exkursion 100 Rubel.

Exkursion 4. (Moskau - Tashkent - Samarkand - Bukhara - Moskau)

Diese Route führt durch Wüsten- und gebirgige Gebiete der mittelasiatischen Unions-Republiken. Es werden gezeigt: Sieroseme, grau-braune Wüstenböden, Takyre, Wiesenböden, Solontschaks, zimtfarbene Gebirgsböden und andere Gebirgswaldböden, bewässerte Böden von Oasen und Sandflächen.

Dauer der Exkursion 10 Tage

Ungefähre Unkosten 300 Rubel

Exkursion 5. (Moskau - Novosibirsk - Moskau und Touren von Novosibirsk aus)

Diese Route führt in den südlichen Teil der westsibirischen Ebene. Die Exkursionsteilnehmer werden studieren können: gebleichte, typische und Solonetz-Tschernoseme, Wiesen-Tschernoseme, Solonetze, Soda-Solontschaks, Solods sowie bestimmte Gebirgsböden Südsibiriens. Sie werden sich selbst vertraut machen können mit den Methoden und Ergebnissen stationärer Beobachtungen an Bodenkomplexen und mit den für ihre Nutzbarmachung angewandten Methoden.

Dauer der Exkursion 10 Tage

Ungefähre Unkosten 300 Rubel

Eine detailliertere Beschreibung der Exkursionsrouten sowie genaue Kosten für die Touren werden in der nächsten Ausgabe des Bulletin veröffentlicht.

Das Organisations-Komitee des
10. Internationalen Bodenkundlichen Kongresses

Moscow State University
Sub-section of Pedology
Moscow-117234, USSR.

gez. V. Kovda

Bericht der Arbeitsgruppe über die Organisation künftiger Kongresse

Die Arbeitsgruppe, bestehend aus den Herren Dr. G. H. Bolt (Niederlande), Dr. I. P. Gerassimov (UdSSR), Dr. M. L. Jackson (USA), Dr. T. G. Marshall (Australien), P. H. Nye (Großbritannien) und E. Schlichting (Deutschland) empfiehlt:

1. *Beziehung zwischen Kongressen und Kommissionstagungen*

Um deren Würdigung zu sichern und guten Nutzen aus der anwachsenden Arbeit in der Bodenkunde zu ziehen, sind verstärkte internationale Kontakte nötig. Diese sollten angesichts der steigenden Kosten und der Komplexität der Kongresse durch Stärkung der Kommissionstagungen gegenüber den Kongressen gepflegt werden. Wir empfehlen daher:

(i) daß der Kongreß möglichst in regelmäßigen Abständen einberufen werden soll, vorzugsweise alle 4 Jahre (vgl. Satzung D 3);

(ii) daß getrennte oder gemeinsame Tagungen der Kommissionen zwischen den Kongressen abgehalten werden sollten (vgl. Satzung I 7).
Satzung D 3: *„Der Kongreß soll mindestens alle 4 Jahre einmal einberufen werden."*

Satzung I 7: *„Die Kommissionen können mit Genehmigung des Beirats besondere Sitzungen zwischen den Kongressen abhalten."*

2. *Allgemeine Ausrichtung der Kongresse*

Der Fortschritt in der Bodenkunde beruht gleichermaßen auf der Entwicklung der Methoden (z.B. in Bodenphysik, -chemie, -biologie und -mineralogie) wie auf deren besserem Einsatz zur Lösung von Problemen (z.B. der Bodenfruchtbarkeit, -genese und -technologie). Die Entwicklung der Methoden würde durch gemeinsame Tagungen von Kommissionen mit verwandten Disziplinen (z.B. Geophytik, Tonmineralogie) angeregt. Dies würde es erleichtern, auf den Kongressen ein Gleichgewicht zwischen getrennten Sitzungen der Kommissionen und problemorientierten gemeinsamen Sitzungen oder allgemeineren Symposien zu halten. Wir empfehlen daher:

(i) daß die Kommissionen gemeinsame Tagungen mit anderen Disziplinen planen sollten;

(ii) daß auf Kongressen bis zu 5 eingeladene Vorträge über spezielle Themen von allgemeinem Interesse vorgesehen werden sollten. Von den normalen Beiträgen (nicht mehr als 400) sollten — bis zu $^2/_3$ der angenommenen Beiträge — solche bevorzugt werden, die bestimmte Themen nach Wahl des Gastlandes in Zusammenarbeit mit den Kommissionen behandeln. Der Rest sollte frei bleiben, um die Darstellung neuer Entwicklungen in der Bodenkunde unabhängig von der Art des besonderen Themenkreisen zu erlauben. Um ein hohes Niveau der Beiträge zu halten, sollte der Auswahlausschuß des Gastlandes nötigenfalls von den Kommissionen unterstützt werden.

3. *Präsentierung und Dokumentation der Beiträge*

Die Arbeitsgruppe war gleichmäßig aufgeteilt bezüglich der Bevorzugung von:

a. vor dem Kongreß verfügbare gedruckte Berichtsbände und ein Nachtragsband mit den Diskussionen;

b. vor dem Kongreß verfügbare vervielfältigte Kurzfassungen und Kongreßbände mit Beiträgen und Diskussionen.

Die Wahl wird stark von den Gegebenheiten im Gastland abhängen. Wir empfehlen daher:

Die allgemeinen Vorbereitungen für den Kongreß sollen vom Organisationskomitee des Gastlandes getroffen werden. Dieses Komitee soll die Kongreßmitglieder in geeigneter Weise und rechtzeitig über den Inhalt der angenommenen Vorträge unterrichten und soll verantwortlich sein für die Veröffentlichung der Sitzungsberichte des Kongresses (vgl. Satzung D 4).

Satzung D 4: *„Die allgemeinen Vorbereitungen für den Kongreß werden vom Organisationskomitee des Gastlandes getroffen. Dieses Komitee ist auch für die Veröffentlichung der Sitzungsberichte des Kongresses verantwortlich."*

NEWS OF THE COMMISSIONS, NOUVELLES DES COMMISSIONS, NEUES DER KOMMISSIONEN

Joint Session Commission V and VI
Stuttgart-Hohenheim, German Federal Republic, Sept. 6 - 13, 1971

The joint meeting of Commissions V and VI was held in Stuttgart-Hohenheim, D.F.R., in September 1971, under the patronage of the Prime Minister of the state of Baden - Württemberg, Dr H. Fillhinger.

The working sessions took place from 8 - 10 september inclusive. A pre- and a post-meeting tour through W. Germany (Hamburg - München), a 2½ and a 2-days excursion in Baden - Württemberg to study the genesis and amelioration of hydromorphic soils, completed the programme. 250 Members representing 30 countries participated in the meeting.

Ministry-director Maier opened the session on behalf of the State-Government and extended the greetings of the Prime Minister and the State Secretary of Agriculture. He stated: "You have organized your conference around the theme: Pseudogleys and Gleys: Genesis and use of hydromorphic soils. You may feel assured that this subject has, in our state, not only great scientific value but also is a genuine practical issue. Indeed my own office that is concerned especially with the promotion of agriculture and forestry, has a keen interest in the central topic.

In Baden - Württemberg heavy and rain water-logged soils occur on a large scale and, as you all know, they make a high demand upon the agriculturist. Our knowledge of these soils, of the characteristics of the habitat as a condition to optimal production, has still many gaps.

We therefore hope that your deliberations will lead to a better understanding of the related problems for the benefit also of the agriculture of our state."

Ministry-director Maier finally wished the meeting a succesful conference. Prof. Dr Dr h.c. E. Mückenhausen as President of the German Society of Soil Science, greeted the participants and expressed his deepfelt thanks to the Federal and State Ministries which through their generous financial support made it possible to hold this conference in Germany.

The President of the I.S.S.S. Prof. Dr. V. Kovda subsequently emphasized the importance of commission-meetings for an optimal operating of the Society. This holds notably for joint sessions that have the purpose to link together the knowledge of soil genesis and classification with experience and results of experiments in soil use and amelioration.

The presidents of Commission V (Dr. R. Dudal) and Commission VI (Prof. Dr. T. Marshall) spoke words of thanks to the hosts. They pointed out that the postponement of the 10th International Congress from 1972 to 1974 the year of the 50th anniversary of the Society, caused a time gap that had to be bridged over by commission meetings. The present meeting on genesis and use of hydromorphic soils is a case in point.

The President of the Conference Prof. Dr. E. Schlichting, then opened the working-session with a review of hydromorphic soils. He commented on the characteristics of ground water and rain water-logged soils and outlined their position and conversion in a changing landscape. 80 Papers were thereupon introduced by invited speakers (I) under various discussionleaders (D).

1. Formation of hydromorphic profile characteristics (I: Bloomfield)

1.1. Sesquioxide formation and conversion (D: v. Schuylenborgh)

1.2. Phosphates, sulphates, carbonates and silicates in hydromorphic soils (D: Whiteside)

2. Hydromorphic soils as segments of the landscape (I: Mückenhausen, 2.1 and 2.2. I: Dudal, 2.3 and 2.4)

2.1. Pedogenetic considerations (D: Gerasimov)

2.2. Pseudogleys and gleys of cool-humid regions (D: Janekovic)

2.3. Hydromorphic soils of temperate-mediterrenean regions (D: Mancini)

2.4. Hydromorphic soils of mediterrenean and tropical regions (D: Kovda)
2.5. Problems of classification of hydromorphic soils (D: Tavernier)

3. Hydromorphic soils as sites for plantgrowth (I: Marshall, 3.1 and 3.2)
3.1. Behaviour of water in hydromorphic soils (D: Childs)
3.2. Water regime in hydromorphic soils (D: Bolt)
3.3. Habitat properties of hydromorphic soils (I: Marschner, 3.3.; D: Uggla)

4. Amelioration of hydromorphic soils (I: Luthin)
4.1. The need of amelioration of hydromorphic soils (D: Staicu)
4.2. The procedure of amelioration of hydromorphic soils (D: Blümel)

At the end of the working-meeting the Chairman of the session reviewed the most important points of the lectures and the ensuing discussions.

This resulted in the following recommendation:

The meeting specifically draws attention to the fact that in the research of and experiments on hydromorphic soils a clear distinction is to be made between groundwater soils and rain-water logged soils. It is proposed that a working group within Commissions V and VI be formed with the task to study and correlate the nomination and classification of hydromorphic soils and to record in which way differences in soil-water systems are reflected in existing classification systems. The following participants were elected members of the working group:

Prof. Dr. V. A. Kovda (USSR), President ISSS
Prof. Dr. E. Schlichting (G.F.R.)
Prof. Dr Ph. Duchaufour (France)
Dr. R. Simonson (U.S.A.)
Dr. F. Blümel (Austria), Representative Commission VI
Dr. R. Dudal (F.A.O.), President Commission V.

Financial support will be requested from ISSS with a view to organize a meeting early 1972.

The closing-address was delivered by Past-President of ISSS, Dr. E. G. Hallsworth. He first spoke to the memory of our late colleague Prof. Dr. L. Kubiena by whom the motion "pseudogley" was introduced. The present meeting that has pseudogley as a central theme, may be seen as a commemoration, also to Kubiena's work as a founder and a promotor of soil micromorphology. He then continued: There is still the gap in understanding between the various commissions. I was pleased to observe to what extent the terminology of Commission II has been adopted by Commission V. On the other hand, the time seems to be far that the principles of Commission I likewise will spread within the realm of Commission V.

Also the present meeting did show less points of common interest between Commissions V and VI than might be hoped for from an endeavour of this nature. Our understanding of soils will only advance to the measure in which our research develops itself multidisciplanary and I would like to stress the need that forthcoming conferences are planned to that purpose. I regret the absense, owing to indisposition, of our secretary-general Prof. Dr. F. A. van Baren, and wish him, in the name of all of us, a speedy recovery.

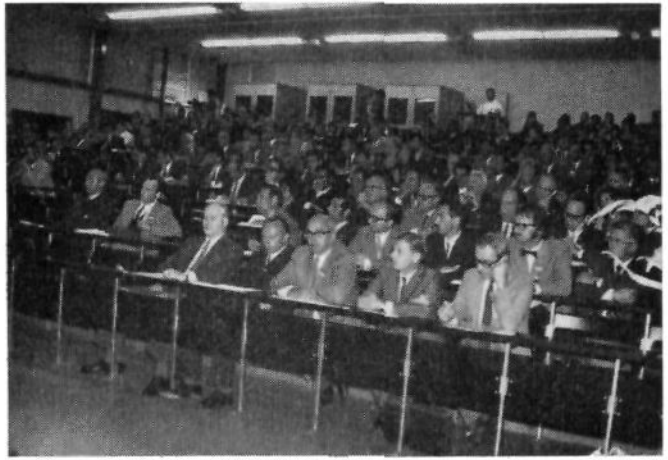
Dr. Hallsworth terminated with words of thanks to the German Society of Soil Science as convenor of the Conference, to the Federal Ministry of Nutrition, Agriculture and Forestry, to the Ministry of Nutrition, Agriculture, Viticulture and Forestry of the State of Baden - Württemberg, and the Governments of the other States for their financial support, to the University of Hohenheim to provide the necessary accommodation and, last but not least, to the Organisation Committee composed of the members E. Mückenhausen, E. Schlichting, K. Bleich (Secretary of the Conference), B. Meyer and H. P. Blume (tour preparation), U. Schwertmann (editor of the transactions of the meeting).

The following documents had been prepared specifically for the Conference:

Excursion guides A and B (Baden-Württemberg)	DM 5.—
Excursion guide C (through the G.F.R.)	DM 15.—
Summaries of the lectures	DM 10.—

JOINT MEETING OF COMMISSIONS V AND VI, STUTTGART-HOHENHEIM, SEPTEMBER 1971

They were listening



Listening to speeches

And jokes

At the Reception in the "Neue Schloss"

to be ordered from

Deutsche Bodenkundliche Gesellschaft
Von Siebold-Strasse 4
D 34 Göttingen, G.F.R.

The complete papers will be published as a special issue of

Verlag Chemie
Pappelallee 3
D 694 Weinheim/Bergstrasse

The price will be DM 100.— - DM 120.—.
Orders are to be addressed directly to Verlag Chemie.

Session conjointe des Commissions V et VI
Stuttgart-Hohenheim, République Fédérale d'Allemagne, 6 - 13 septembre 1971

La réunion conjointe des Commissions V et VI s'est tenue à Stuttgart-Hohenheim, R.F.A. en septembre 1971 sous le patronage du Premier Ministre de l'Etat de Baden-Württemberg, le Dr. H. Fillinger.

Les sessions de travail ont eu lieu du 8 au 10 septembre inclus. Avant et après la réunion, une excursion à travers l'Allemagne de l'Ouest (Hambourg-Munich), et une excursion de 2½ jours dans le Baden-Württemberg, dans le but d'étudier la genèse et l'amélioration des sols hydromorphes, ont complété le programme. 250 personnes représentant 30 pays ont participé à cette réunion.

Le Ministre-Directeur Maier a ouvert la session au nom du Gouvernement et a exprimé les souhaits du Premier Ministre et du Secrétaire d'Etat à l'Agriculture. Il a dit: "Vous avez organisé votre conférence sur le thème: Pseudogleys et Gleys; genèse et utilisation des sols hydromorphes. Vous pouvez être assurés que ce sujet a, dans notre Etat, non seulement une grande valeur scientifique, mais également une véritable orientation pratique.

Vraiment mon propre service, spécialement concerné par la promotion de l'Agriculture et de la Sylviculture, trouve un vif intérêt dans ce sujet important. Dans le Baden-Württemberg, il y a sur une grande étendue, comme vous le savez, des sols lourds et saturés par les eaux de pluie. Ils intéressent au plus haut point les agriculteurs. Votre connaissance de ces sols et des caractéristiques de leur environnement comme condition de leur production optimale présente encore de nombreuses lacunes. Nous espérons, par conséquent, que vos discussions aboutiront à une meilleure compréhension des problèmes qui se posent pour que l'agriculture de notre Etat en bénéficie également." ,

Le Ministre-Directeur Maier souhaita finalement plein succès à la réunion. Le Prof. Dr. E. Mückenhausen, comme Président de la Société Allemande de la Science du Sol, souhaita la bienvenue aux participants et exprima ses plus vifs remerciements aux Ministres Fédéraux et d'Etat qui par leur contribution financière généreuse ont rendu possible l'organisation de cette conférence en Allemagne.

Le Président de l'A.I.S.S., le Prof. Dr. V. Kovda fit ressortir ensuite l'importance des réunions de Commissions pour que l'activité de l'Association soit optimale, ce qui renforce l'appui en faveur de réunions conjointes dont le but est de faire converger les connaissances sur la genèse et la classification et l'expérience et les résultats expérimentaux en utilisation et amélioration des sols.

Les Présidents des Commissions V (Dr. R. Dudal) et VI (Prof. Dr. T. Marshall) remercièrent les hôtes. Ils firent remarquer qui le report du 10e Congrès International de 1972 à 1974, année du 50e anniversaire de l'Association, fut la cause d'un trop long intervalle de temps que l'on a comblé par des réunions de Commissions. Il en est résulté par exemple la réunion présente sur la genèse et l'utilisation des sols hydromorphes. Le Président de la Conférence le Prof. Dr. E. Schlichting, ouvrit ensuite la session de travail par une synthèse sur les sols hydromorphes. Il fit des commentaires sur les caractéristiques des sols de nappe phréatique et des sols saturés par l'eau de pluie et esquissa leur position et leur transformation dans un paysage changeant. 80 communications furent présentées par des orateurs invités (I) tandis que des responsables menaient les discussions (D).

1. Formation des caractéristiques hydromorphes du profil (I: Bloomfield)

1.1. Formation des sesquioxydes et leur changement (D: v. Schuylenborgh)

1.2. Phosphates, sulfates, carbonates et silicates dans les sols hydromorphes (D: Whiteside)

2. Sols hydromorphes comme parties du paysage (I: Mückenhausen, 2.1. et 2.2.; I: Dudal, 2.3. et 2.4.)

2.1. Considérations pédogénétiques (D: Gerasimov)

2.2. Pseudogleys et gleys des régions froides et humides (D: Janekovic)

2.3. Sols hydromorphes des régions méditerranéennes tempérés (D: Mancini)

2.4. Sols hydromorphes des régions méditerranéennes et tropicales (D: Kovda)

2.5. Problèmes de classification des sols hydromorphes (D: Tavernier)

3. Sols hydromorphes et sites pour la croissance des plantes (I: Marshall, 3.1. et 3.2.)

3.1. Comportement de l'eau dans les sols hydromorphes (D: Childs)

3.2. Régime de l'eau dans les sols hydromorphes (D: Bolt)

3.3. Propriétés locales des sols hydromorphes (I: Marschner, 3.3; D: Uggla)

4. Amélioration des sols hydromorphes (I: Luthin)

4.1. La nécessité de l'amélioration des sols hydromorphes (D: Staicu)

4.2. La méthode d'amélioration des sols hydromorphes (D: Blümel)

A la fin de la réunion de travail, le Président de la session a synthétisé les points les plus importants des communications et des discussions qui ont suivi. Il en est résulté la recommandation suivante:

La réunion attire spécialement l'attention sur le fait que dans la recherche et l'expérimentation sur les sols hydromorphes une distinction doit être faite entre les sols de nappe phréatique et les sols saturés par l'eau de pluie. Il est proposé qu'un groupe de travail dans les Commissions V et VI soit formé avec mission d'étudier et de donner une corrélation entre les noms et les classifications de sols hydromorphes et de signaler dans quel sens les différences dans les systèmes sol-eau sont prises au sein des classifications existantes.

Les membres suivants ont été élus pour former le groupe de travail:

Prof. Dr. V. A. Kovda (URSS): Président de l'A.I.S.S.

Prof. Dr. E. Schlichting (R.F.A.)

Prof. Dr. Ph. Duchaufour (France)

Dr. R. Simonson (U.S.A.)

Dr. F. Blümel (Australie) représentant la Commission VI

Dr. R. Dudal (F.A.O.) représentant la Commission V

Une contribution financière sera demandée à l'A.I.S.S. en vue d'organiser une réunion au début de 1972.

Le discours de clotûre a été prononcé par l'Ancien Président de l'A.I.S.S. le Dr. E. G. Hallsworth. Il rappela en premier lieu la mémoire de notre ancien collègue le Prof. Dr. L. Kubiena qui introduisit la notion de "pseudogley". La présente réunion qui avait le pseudogley comme centre d'intérêt, doit être dédiée á sa mémoire d'autant plus que le Dr. Kubiena est le fondateur et le promoteur de la micromorphologie. Il poursuivit: Il reste encore une lacune dans l'entente entre les différentes Commissions. J'ai eu le plaisir de constater que la terminologie de la Commission II a été adoptée par la Commission V. D'autre part, il semble qu'on est encore loin du moment où les principes de la Commission I s'étendront à l'esprit de la Commission V. De même la réunion présente montre moins de points d'intérêt commun entre les Commissions V et VI au point qu'on peut espérer un effort dans ce sens. Notre compréhension des sols n'avancera que dans la mesure où notre recherche aura un développement multidisciplinaire et je voudrais insister sur l'urgente nécessité de préparer dans ce but les futures conférences. Je regrette l'absence, pour raison de santé, de notre Secrétaire Général le Prof. Dr. F. A. van Baren, et je lui souhaite au nom de nous tous un prompt rétablissement.

Le Dr. Hallsworth a conclu en remerciant la Société Allemande de la Science du Sol qui a organisé la Conférence, le Ministre Fédéral de l'alimentation, de l'agriculture et des forêts, le Ministre de l'alimentation, de l'agriculture, de la viticulture et des forêts de l'Etat de Baden-Württemberg et les Gouvernements des autres Etats pour leur contribution financière, l'Université de Hohenheim qui s'est occupée de l'organisation matérielle et enfin, last but not least, le Comité organisateur composé de MM. E. Mückenhausen, E. Schlichting, K. Bleich (Secrétaire de la Conférence), B. Meyer et H.-P. Blume (qui ont préparé les excursions), U. Schertmann (éditeur des C.R. de la réunion).

Les documents suivants ont été préparés spécialement pour la conférence:

Guides des excursions A et B (Baden-Württemberg)	DM 5.—
Guide de l'excursion C (à travers la R.F.A.)	DM 15.—
Résumé des communications	DM 10.—

On peut se les procurer à la

Deutsche Bodenkundliche Gesellschaft
Von Siebold-Strasse 4
D 34 Göttingen, D.B.R.

Les textes complets des communications seront publiés sous forme d'un no. spécial de la

Verlag Chemie
Pappelallee 3
D 694 Weinheim/Bergstrasse

Le prix sera de DM 100.— - 120.—.
Adressez les commandes directement à la Verlag Chemie.

Gemeinsame Tagung von Kommission V und VI der Internationalen Bodenkundlichen Gesellschaft in Stuttgart-Hohenheim, 6. - 13. September 1971

Im September 1971 fand in Stuttgart-Hohenheim die Gemeinsame Tagung von Kommission V und VI der Internationalen Bodenkundlichen Gesellschaft statt, die unter der Schirmherrschaft des Ministerpräsidenten von Baden-Württemberg, Herrn Dr. Hans Filbinger, stand. Die Sitzungen wurden vom 8. - 10. September abgehalten; vorher und nachher erfolgte eine zehntägige Exkursion quer durch Deutschland (Hamburg-München), eine zweieinhalbtägige und eine zweitägige Exkursion in Baden-Württemberg, die sich mit der Genese und Melioration hydromorpher Böden befaßten. An der Tagung nahmen rund 250 Teilnehmer aus 30 Ländern teil.

Ministerialdirektor Maier eröffnete die Sitzungen im Namen der Landesregierung und überbrachte die Grüße des Herrn Ministerpräsidenten und des Herrn Landwirtschaftsministers. Er führte weiter aus: „Sie haben Ihren Kongreß unter das Rahmenthema „Pseudogleye und Gleye-Genese und Nutzung hydromorpher Böden" gestellt. Sie dürfen sicher sein, daß dieses Thema in diesem Land nicht nur eine große wissenschaftliche Bedeutung hat, sondern auch eine erhebliche praktische Aktualität besitzt. Gerade mein Haus, das sich in besonderer Weise um die Förderung der Landeskultur und der Land- und Forstwirtschaft bemüht, bringt diesem Themenkreis ein besonderes Interesse entgegen ...

Baden-Württemberg ist ein Land, in welchem schwere und häufig auch vernäßte Böden vorherrschen. Sie stellen, wie Sie wissen, an die Bewirtschaftung hohe Ansprüche. Unser Wissen gerade über diese Böden, ihre Eigenschaften als Pflanzenstandort als Voraussetzung für eine optimale Nutzung enthält noch manche Lücken. Wir erhoffen deshalb von Ihren Beratungen neue Erkenntnisse, die letztlich auch der Landeskultur dieses Landes zugute kommen."

Er wünschte schließlich der Tagung einen angenehmen und erfolgreichen Verlauf.

Prof. Dr. Dr. h.c. E. Mückenhausen begrüßte die Teilnehmer als Präsident der Deutschen Bodenkundlichen Gesellschaft und verband damit seinen Dank an die

Ministerien von Bund und Ländern, die durch eine großzügige finanzielle Unterstützung die Durchführung der Tagung ermöglichten.

Der Präsident der Internationalen Bodenkundlichen Gesellschaft, Prof. Dr. V. Kovda, unterstrich die Bedeutung von Kommissionstagungen für das Fortleben der Gesellschaft, insbesondere von gemeinsamen Tagungen dieser Art mit dem Ziel, das Wissen über Bodengenese und -klassifikation mit den Erfahrungen und Forschungsergebnissen bei Meliorationsversuchen zu verknüpfen. Die Vorsitzenden von Kommission V (Dr. R. Dudal) und VI (Prof. Dr. T. Marshall) bedankten sich bei den Gastgebern. Sie wiesen darauf hin, daß durch die Verlegung des 10. Internationalen Kongresses von 1972 auf 1974, das Jahr des 50-jährigen Bestehens der Gesellschaft, ein Zeitraum entstanden sei, der mit Hilfe von Kommissionstagungen überbrückt werden sollte. Daraus resultierte der Beschluß von Kommission V und VI, eine gemeinsame Tagung über Genese und Nutzung hydromorpher Böden durchzuführen.

Der Präsident der Tagung, Prof. Dr. E. Schlichting, leitete die Vortragsfolge mit einem Referat über hydromorphe Böden ein, in dem er die Eigenart der grund- und stauwasserbeeinflußten Böden darstellte und ihre Stellung und Veränderung in der sich ändernden Landschaft abgrenzte. Die 80 Referate wurden durch Vorträge eingeladener Sprecher eingeleitet (E. in Klammern; Sitzungsvorsitz und Diskussionsleitung V in Klammern) und verteilten sich auf die Themen:

1. *Entstehung hydromorpher Profilmerkmale (E: Bloomfield)*
1.1. Sesquioxidbildung und -umwandlung (V: v. Schuylenborgh)
1.2. Phosphate, Sulfate, Karbonate und Silikate in hydromorphen Böden (V: Whiteside)

2. Hydromorphe Böden als Landschaftssegmente (E: Mückenhausen 2.1. und 2.2., E: Dudal 2.3. und 2.4.)
2.1. Pedogenetische Grundlagen (V: Gerasimov)
2.2. Pseudogleye und Gleye kühl-feuchter Gebiete (V: Janekovic)
2.3. Hydromorphe Böden gemäßigt-mediterraner Gebiete (V: Mancini)
2.4. Hydromorphe Böden mediterraner und tropischer Gebiete (V: Kovda)
2.5. Probleme der Klassifikation hydromorpher Böden (V: Tavernier)

3. Hydromorphe Böden als Pflanzenstandorte (E: Marshall 3.1. und 3.2.)
3.1. Verhalten des Wassers in hydromorphen Böden (V: Childs)
3.2. Wasserhaushalt hydromorpher Böden (V: Bolt)
3.3. Standsortseigenschaften hydromorpher Böden (E: Marschner 3.3.); (V: Uggla)

4. Melioration hydromorpher Böden (E: Luthin)
4.1. Meliorationsbedarf hydromorpher Böden (V: Staicu)
4.2. Meliorationsverfahren hydromorpher Böden (V: Blümel)

Gegen Ende der Vortrags-Tagung wurden in den Abschlußreferaten der Sitzungsvorsitzenden die wichtigsten Ergebnisse der Vorträge und der Diskussionen vorgetragen.

Daraus resultierte die folgende Empfehlung:

„Die Tagung lenkte besondere Aufmerksamkeit darauf, daß bei Forschungen und Versuchen mit hydromorphen Böden ein klarer Unterschied zwischen grund- und stauwasserbeeinflußten Böden zu machen ist. Desweiteren wurde vorgeschlagen, eine Arbeitsgruppe innerhalb der Kommissionen V und VI zu schaffen, um die Benennung und Klassifikation hydromorpher Böden zu untersuchen und zu korrelieren, und festzulegen, wie gewichtig Unterschiede im Bodenwassersystem sich in bestehenden Klassifikationssystemen widerspiegeln. Die Arbeitsgruppe wurde wie folgt gebildet:

Prof. V. A. Kovda (UdSSR), Vorsitzender der IBG
Prof. Dr. E. Schlichting (BRD) ,
Prof. Ph. Duchaufour (Frankreich)
Dr. R. Simonson (U.S.A.)
Dr. F. Blümel (Österreich), Vertreter der Kommission VI
Dr. R. Dudal (FAO), Vertreter der Kommission V (Italien) ,

Die IBG wurde um finanzielle Unterstützung für das Treffen dieser Arbeitsgruppe zu Beginn 1972 gebeten."

Die Schlußworte sprach der Altpräsident der Internationalen Bodenkundlichen Gesellschaft, Dr. E. G. Hallsworth.

Er gedachte des vor einigen Monaten verstorbenen Kollegen Prof. Dr. L. Kubiena und wies darauf hin, daß der Begriff „Pseudogley" des Tagungsthemas auf ihn zurückgehe. Dies sei als ein passendes Denkmal zu werten, ebenso wie die enorme Weiterentwicklung der Mikromorphologie in der bodenkundlichen Forschung. Er führte weiter aus: „Es gibt immer noch die Kluft in der Verständigung zwischen den verschiedenen Kommissionen. Ich war erfreut, wie weit die Ausdrucksweise der Kommission II in die der Kommission V eingedrungen ist, aber es gibt wenig Anzeigen dafür, daß die Prinzipien der Kommission I sich in Kommission V verbreitet haben. In der Tat schien es auf dieser Tagung weniger Anregungen zwischen Kommission V und VI zu geben, als ein gemeinsames Unternehmen dieser Art erhoffen ließ. Unser Wissen über Böden wird nun in einem Maße fortschreiten, wie unsere Forschungen sich multidisziplinär entwickeln werden, und ich würde darauf dringen, daß zukünftige Tagungen bewußt dahingehend geplant werden."

Er bedauerte die Abwesenheit des erkrankten Generalsekretärs der Internationalen Bodenkundlichen Gesellschaft Prof. Dr. F. A. van Baren und sprach im Namen der Versammlung die besten Genesungswünsche aus.

Er schloß mit einem Dankeswort an die DFG als Veranstalter der Tagung an das Bundesministerium für Ernährung, Landwirtschaft und Forsten, das Ministerium für Ernährung, Landwirtschaft, Weinbau und Forsten von Baden-Württemberg und aller übrigen Bundesländer für die finanzielle Hilfe, an die Universität Hohenheim für die Bereitstellung der Räume und an das Organisationskommitee, bestehend aus den Herren Mückenhausen, Schlichting, K. Bleich (Tagungssekretär), B. Meyer und H. P. Blume (Exkursionsvorbereitung), U. Schwertmann (Redaktion der Veröffentlichungen der Vorträge).

Aus Anlaß der Tagung wurden veröffentlicht:

Exkursionsführer zu Exkursion A und B durch Baden-Württemberg	(DM 5,—)
Exkursionsführer zu Exkursion C durch die Bundesrepublik	(DM 15,—)
Kurzfassungen der Vorträge	(DM 10,—)

erhältlich bei der Geschäftsstelle der DBG -

Deutsche Bodenkundliche Gesellschaft
Von Siebold-Strasse 4
D 34 Göttingen, D.F.R.

Die ungekürzten Vorträge erscheinen in einem Sonderband beim Verlag Chemie

Verlag Chemie
Pappelallee 3
D 694 Weinheim/Bergstrasse

voraussichtlicher Preis DM 100,— bis DM 120,—.
Bestellungen bitte dorthin richten!

COMMISSION I

Joint Symposium on Fundamentals of Transport Phenomena in Porous Media
International Association for Hydraulic Research - Section Committee
International Society of Soil Science - Commission I
University of Guelph, Guelph, Ontario, Canada - August 7 - 11, 1972

The Section of Flow Through Porous Media of the International Association of Hydraulic Research (IAHR) in conjunction with Commission I (Soil Physics) of the International Society of Soil Science (ISSS) will jointly sponsor the Second Symposium on Fundamentals of Transport Phenomena in Porous Media. The University of Guelph, Guelph, Ontario, Canada will host the Symposium to take place on August 7 - 11, 1972. It is the intention that this Symposium will serve as a meeting ground not only for hydraulic engineers, hydrologists and soil scientists, but also for scientists and engineers from other associated disciplines such as chemical and petroleum engineering, textile physics, etc.

Each session will be opened by a state-of-the-art speaker who will present a review or summary of the most recent advances in his field. The invited speakers include Dr. J. R. Philips (Australia), Dr. W. R. Gardner (U.S.A.), Dr. G. H. Bolt (The Netherlands), Dr. J. H. Groenevelt (Australia), Dr. R. A. Greenkorn (U.S.A.), Dr. J. J. Fried (France) and Dr. J. P. Heller (U.S.A.). It is planned to distribute a soft-covered Proceedings incorporating the invited papers and contributed papers (approximately 40 abstracts from scientists in 15 countries received by early February, 1972) to all preregistered participants by July 1, 1972.

For further information and preregistration material (including tentative list of participants) please contact:

Dr. D. E. Elrick
Department of Land Resource Science
University of Guelph
Guelph, Ontario, Canada

NEUES DER GESELLSCHAFTEN IN EINZELNEN LÄNDERN
NEWS OF THE NATIONAL SOCIETIES
NOUVELLES DES SOCIETES NATIONALES

Bodenkundliche Gesellschaft der Deutschen Demokratischen Republik

Die 5. Wissenschaftliche Tagung und Mitgliederversammlung wurde vom 19. bis 21. Oktober 1971 in Magdeburg abgehalten.

Die Tagung, die aus Anlass ihres 20jährigen Bestehens gemeinsam mit der Deutschen Akademie der Landwirtschaftswissenschaften zu Berlin durchgeführt wurde, stand unter der Thematik „Agrochemie und Erhöhung der Ackerkultur". Hauptreferate:

1. Bedeutung und Möglichkeiten der Mineraldüngung bei der Intensivierung der Pflanzenproduktion.
   Autorenkollektiv unter Leitung von Dr. Beer, Leipzig.
2. Wirkprinzipien und Anwendungsverfahren von Bodenverbesserungsmitteln zur Verbesserung physikalischer Bodeneigenschaften.
   Autorenkollektiv unter Leitung von Dr. Lehfeldt, Müncheberg.
3. Möglichkeiten und Bedeutung des Pflanzenschutzes für eine hohe Ackerkultur.
   Autorenkollektiv unter Leitung von Prof. Dr. Lyr, Kleinmachnov.

Im Rahmen einer lebhaften Diskussion wurden über Düngung und Pflanzenernährung 11 Kurzreferate, über Rationalisierung der Bodenbearbeitung 2 Kurzreferate, über synthetische Bodenverbesserungsmittel 4 Kurzreferate und über Pflanzenschutzmittel im Boden 3 Kurzreferate gehalten.

Prof. Dr. Kundler wurde als Vorsitzender der Gesellschaft wiedergewählt. Zum Abschluss der Tagung fand die Besichtigung des Agrochemischen Zentrums Wanzleben statt.

Die Vorträge werden im „Archiv für Acker- und Pflanzenbau und Bodenkunde" veröffentlicht.

Soil Science Society of Ghana

The 7th Annual Conference of the Soil Science Society of Ghana was held at the Agricultural College, Kwadaso-Kumasi from the 24th to the 26th of November, 1971. The prominent feature of the Conference was the reading of technical papers at the technical sessions. Ten papers covering the following fields were read:

Soil Physics; Soil Chemistry; Soil Fertility; Soil genesis, morphology, classification and survey and Soil and Water conservation. All the papers dealt mainly with the soils of Ghana.

The following officers were elected to serve on the Executive Committee for the next two years:

President	:	Dr. S. V. Adu, Senior Research Officer, Soil Research Institute, C.S.I.R. Kwadaso-Kumasi
Vice President	:	Dr. P. Appiagyei-Danka, Executive Director, Grains Development Board, Kumasi.
Secretary	:	Dr. G. K. Asamoa, Senior Research Officer, Soil Research Institute, C.S.I.R. Kwadaso-Kumasi
Treasurer	:	Dr. S. K. Takyi, Research Officer, Soil Research Institute, C.S.I.R. Kwadaso-Kumasi
Members	:	Dr. D. K. Acquaye (Past President), Senior Lecturer, Faculty of Agriculture, University of Ghana, Legon, Accra Mr. E. J. A. Khan, Senior Research Officer, Agricultural Irrigation Research Station, University of Ghana, Kpong Dr. Edward Baffoe-Bonnie, Lecturer, Faculty of Agriculture, University of Science and Technology, Kumasi

Israel Society of Soil Science

The following officers were elected members of the Executive Council:

Chairman : Dr. Y. Avnimelech
Treasurer : Dr. M. Gal
Secretary : S. Marish
Members : Prof. D. Yaalon
Dr. M. Fucks

The address is: c/o Soil Conservation Service, Hakirya, Tel-Aviv.

Sociedad Mexicana de la Ciencia del Suelo

The Mexican Society of Soil Science has just finished the printing of the Proceedings of the Fourth Mexican Congress of Soil Science. They consist of two volumes in Spanish, with 56 papers written by about 80 collaborators.

Volume I. 530 pages. 36 Articles on Soil Fertility, Plant Nutrition, Soil Chemistry and Soil Microbiology. Price: US. $ 6.00 postage incl.

Volume II 300 pages. 20 Articles on Soil Physics, Soil Genesis, Morphology and Classification, Soil Conservation, Soil-Water-Plant Relations and Soil-Vegetation Relationships. Price: US $ 5.00 postage incl.

Orders to : **Sociedad Mexicana de la Ciencia del Suelo,**
Apartado Postal No. 45,
Chapingo, MEXICO

All-Union Society of Soil Scientists of the USSR

At the occasion of the IVth Delegate's Congress of the Soviet Soil Scientists (September 1971) the following new chairmen and secretaries of the Commissions of the All-Union Society of Soil Scientists of the USSR have been elected:

I - *Soil Physics*
Chairman: Dr. A. D. Voronin
Secretary: Dr. V. G. Vitiazev

II - *Soil Chemistry*
Chairman: Prof. Dr. N. G. Zirin
Secretary: Dr. V. A. Bolshakov

III - *Soil Biology*
Chairman: Dr. D. G. Zviaginzev
Secretary: Dr. I. V. Alexandrova

IV - *Soil Fertility and Agrochemistry*
Chairman: Prof. Dr. A. V. Sokolov
Secretary: Dr. E. A. Andreeva

V - *Soil Genesis, Classification and Geography*
Chairman: Prof. Dr. N. A. Nogina
Secretary: Dr. N. A. Karavaeva

VI - *Soil Technology*
Chairman: Prof. Dr. V. V. Egorov
Secretary: Dr. N. G. Minashina

VII - *Soil Mineralogy*
Chairman: Prof. Dr. N. I. Gorbunov
Secr.: Prof. Dr. V. V. Dobrovolsky

All correspondence to the chairmen and secretaries of the Commissions should be directed to the following address:

All-Union Society of Soil Scientists,
Dokuchaev Soil Institute,
Pygevski per. 7, Moscow 17,
USSR.

MISCELLANEOUS NEWS - INFORMATIONS DIVERSES VERMISCHTE MITTEILUNGEN

INQUA - Commission of Paleopedology

During the Symposium on the Age of Parent Materials and Soils, Amsterdam, 10 - 15 August 1970, it was decided that the Commission prepares a new more complete bibliography on Paleopedology with a different arrangement of subjects. Dr. A. Ruellan, Secretary of the Commission is in charge of preparing this new edition, which should be ready before the 9th INQUA Congress, New Zealand, January - February 1974. All the members of the INQUA-Commission have been informed by circular letter of the proposals of Dr. Ruellan. It is suggested that any member of ISSS interested in the subject should contact Dr. A. Ruellan

ORSTOM
70 - 74 Route d'Aulnay
93 - Bondy, France

The deadline for receiving contributions is October 1, 1972.

Commission International du Génie Rural

The 1st section of the International Commission of Agricultural Engineering will organize study days in Florence, Italy from 12 - 16 September 1972.
The themes are:

1. Surface irrigation and sub-irrigation: technical and economical problems of irrigation and use.
2. Soil erosion and conservation: scientific and technical applications, experiments and realization.

Final date for enrolment is May 31, 1972. Participation fee 10,000 Lires.
For further information apply to the

Organizing Committee C.I.G.R.
Istituto di Idronomia Montana
Piazzale delle Cascine. 18
50144 Florence - Italy

Eighth Congress on Irrigation and Drainage, Varna (Bulgaria), May 1972

The International Commission on Irrigation and Drainage will hold its 8th Congress from 12 to 27 May in Bulgaria's beautiful Black Sea resort of Varna.

The technical programme includes the following topics:

1. Field irrigation and drainage in deltaic, coastal and low-lying areas.
2. Recent and promising developments including mechanization of operations in the field of irrigation and drainage.
3. Factors affecting river training and flood plain regulation (including flood zoning).

Special sessions are devoted to:

Essential measures for introduction and development of irrigation and drainage schemes in developing countries.

A symposium on Water Resources System Planning concludes the technical sessions. Study tours complete the programme, whereas special care is taken of the accompanying ladies.

Registration fee the Conference is US. $ 30.— and costs of participating in one of the three tours envisaged US. $ 130.— $ 140.—.

For programme and further information apply to

Bulgarian Organizing Committee
VIII Congress ICID
Ul. Laveté 16
SOFIA, Bulgaria
Cables: BULGICID. Tel. 87.67.36 and 88.54.81

Birthday Centenary of Academician K. K. Gedroits

by A. A. Rode

April 6, 1972 was the birthday centenary of K. K. Gedroits, outstanding Russian and Soviet soil scientist and agrochemist. In 1897 K. K. Gedroits graduated from the St. Petersburg Forestry Institute and in the same year began to work at the Agricultural Chemistry Laboratory, Ministry of Agriculture, under the guidance of the well-known soil scientist Professor P. S. Kossovitch. During the first 18 years (1897 - 1915) Gedroits investigated the problems of plant nutrition, predominantly those of nitrogen and phosphorus, by greenhouse experiments. He published 37 original papers on this subject.

While studying the relevant questions Gedroits got almost from the very beginning interested in the relationships between the soil solution and the solid part of soil. In 1909 he started the experimental study of soil colloids and of the absorptive capacity of the soils, devoting since 1916 all his time to these problems. From 1912 to 1930 Gedroits wrote more than 40 publications on these subjects including several monographs of which the most significant are "Solonetzes, their Origin, Properties and Amelioration" (1928), "Solodization of Soils" (1926) and „The Absorptive Capacity of Soils" (1922, 1929, 1932, 1933). In this last monograph Gedroits generalized the results of all investigations conducted by him. Based entirely on the rich experimental material, this book contains the fundamentals of colloidal chemistry of the soils. It gives an idea of soil colloids, their chemical and granulometric composition; considers the nature and laws of the cation exchange between the soil colloids and soil solutions; presents a conception of cation exchange capacity; considers the effect of various exchangeable cations on the peptization of the soil mass and on its physical properties; presents an original theory on the origin of soda in the soils, etc.

Gedroits has greatly contributed to the elucidation of the nature and genesis of solonetzes and solods and showed that these soils are elements of one evolutional series: saline soils - solonetz - solod. His concepts of the soil colloids have thrown light on the nature of the most significant components of the soil-forming process and have initiated a new epoch in the progress of the Dokuchaev's soil science. Under the influence of Gedroits's contribution in the twenties of this century, an extensive development of the colloidal chemistry of soils started first in the USSR and then abroad. Simultaneously Gedroits's ideas deeply penetrated into and were extensively applied in the contiguous branches of science - mineralogy, geochemistry, agrochemistry, reclamation, etc.

Gedroits has also greatly contributed to the development and systematization of the methods for the chemical analysis of soils. His handbook on this subject, comprising more than 600 pages, was reprinted a number of times. It still is an important guide-book in this field. The main of Gedroits's works have been translated into foreign languages.

In 1927 Gedroits was elected corresponding member and in 1929 academician of the USSR Academy of Sciences; in 1930 he was nominated President of the International Society of Soil Science and President of the Second International Congress of Soil Science, held in Leningrad and Moscow.

He died on Octobre 5, 1932 of a heart attack.

NEW EDITIONS - NOUVELLES EDITIONS - NEUE AUSGABEN

N. HUDSON. Soil Conservation pp. 320. fig., photogr., Publisher: B. T. Batsford Ltd. London 1971. Price £ 4.50

This is an up-to-date account of the principal aspects of soil erosion and its control that served as the material for a course of soil conservation for multinational post-graduate students. Based on thirteen years' research into erosion control in Africa and on close scientific contact with research workers throughout the world it is intended to serve three purposes:

1. To give information about the significant advances which have been made in the last few years.
2. To show how the wealth of experience in both research and the methods of soil conservation can be applied in the developing countries.
3. To present the engineering approach to soil conservation in such a way that students of all disciplines may see that it is nothing more complicated than common sense and simple arithmetic.

The author indeed succeeded in reaching this goal. The book makes easy reading, is amply illustrated with figures and photographs, be it that the quality of the reproduction suffered from the off-set type of printing. It has however the advantage that one can extend one's library with a low-priced volume on the adequately dealt with pressing problem of soil conservation as a basis for agricultural development.

GEORGETA MAVROCORDAT: Die Böden Rumäniens. Osteuropastudien der Hochschulen des Landes Hessen. Reihe I, Giessener Abhandlungen zur Agrar- und Wirtschaftsforschung des Europäischen Ostens, Band 58, 1971.

This book is a first and creditable result of a scheme of international scientific cooperation, viz. soil scientists of the Rumanian Academy of Sciences (Bucharest) and of the Justus Liebig University (Giessen; Fed. Rep. of Germany), who have agreed to work together on some specific pedogenetic problems in Rumania. Pedological studies in Rumania have started at an early date, in concurrency with the Russian school. These studies have proved to be significant as the country shows a great variety of geological and environmental conditions, making a pedogenetical approach very rewarding. Unfortunately, publications with respect to these studies in a language other than Rumanian are very scarce. For this reason the present book, compiled by Mrs. Mavrocordat and written in German will be very welcome to those who are not acquainted with the Rumanian language.

Within the limited space of about 150 pages Mrs. Mavrocordat has succeeded in presenting a survey of the soils of Rumania. After a short but adequate treatment of the physiography, geology, climate and natural vegetation, a concise description is given of the soils, arranged according to their zonal and intrazonal occurrence. Classification and nomenclature is adapted to the German System, which implies emphasis on virgin soils. Most of the soils are illustrated by a profile description, data on climate and some chemical and physical characteristics. In many cases the names, according to the USDA classification are mentioned. The appendix includes a selection of coloured profile pictures of the most important soils. All in all a most interesting source of information on Middle European soils for any student in soil geography.

D. Creutzberg
Intern. Soil Museum, Utrecht

ANTHONY YOUNG. Slopes. Geomorphology Texts, Volume 3. VII + 288 pp. Oliver & Boyd, Edinburgh 1972. £ 5.00.

Although the subject dealt with in this book is not soil science sensu stricto it deserves close attention. Unnecessary to say that soil, not being just a source of samples for various analyses, is an important element in landscape. Soil genesis is to some extent fundamental to the evolution of landscape, and, vice versa, knowledge of landscape-evolution may reveal important facts concerning soil genesis. From this point of view, many soil scientists pay attention to the development of landscape, slopes and the processes leading to their actual presence. Young's book includes slope development, primarily of sub-aerial forms of erosional origin; a

subject for which great interest has been shown by many geomorphologists, especially in the last two decades. A historical outline of the different stages in the development of ideas on surface-erosion processes is followed by a chapter on concepts and approaches of the evolution of slopes and a chapter on the main theories dealing with slope evolution (Davisian cycle, W. Penck's system on morphological analysis and L. C. King's hillslope cycle).

After this introductory part, surface processes are briefly discussed, followed by reflections on creep, solifluction, wash and rapid mass movements. A chapter dealing with theories on slope evolution is succeeded by one on numerical models to explain this phenomenon. Subsequently, the evolution of cliffs (free faces) and screes (talus slopes) is treated, and then profile forms, slope angle, plan form of slopes and their ways of presentation are dealt with. Special attention is given to regolith and micro-relief as well as environmental factors such as lithology, structure (superposition of strata of different lithology), climate, and vegetation. The text is concluded by chapters on inherited and relict features, valley asymmetry, and applications in engineering, agriculture and soil science. Throughout the book, all terms used are defined, making the subject easily accessible to non-geomorphologists. An extensive bibliography (about 1,000 references) although not fully complete (we missed for instance Bakker and Strahler 1956 (page 105), Bakker and Le Heux, 1947 and 1952 (page 107)), and a detailed combined subject and author-index conclude the book. As already mentioned above, the subject treated in this book is not soil science. Yet we feel that it may help soil scientists to a better understanding of the narrow connections between soil and landscape genesis.

J. A. K. Boerma,
Soils Institute, Utrecht

GROUNDWATER SALINITY. Contr. No. 13 of the Committee on Desert and Arid Zones Research. Am. Ass. Adv. Sciences, New Mexico Highlands University, Las Vegas, New Mexico, 1970, pp. 104.

This volume is a collection of papers presented April 23 - 24, 1970 in Las Vegas, N. M. They touch on but a few of the many research projects being conducted to achieve a better understanding of saline waters. The subject matter ranges from a general consideration of the geochemistry of saline waters through biological and hydrological aspects, to production of raw materials from brines, to consideration of water supplies, both in regard to salt-water encroachment in acquifers and large-scale desalinization of salt water for the purpose of producing municipal water supplies.

ECONOMIC MODELS AND QUANTITATIVE METHODS FOR DECISIONS AND PLANNING IN AGRICULTURE. Proceedings of an East-West Seminar; ed. by Earl O. Heady. Ames (Iowa, U.S.A.), The Iowa State University, 1971. XIII, 518 p. Tables. Graphs. Maps. Refs.

The 27 papers collected in this volume are from an East-West seminar, held in Hungary in 1968, and are written by agricultural economists from 17 countries, including USSR, Poland, Czechoslovakia, Romania and Yugoslavia as socialist countries, along with twelve developed capitalist countries.

Modern methods for decision making and planning in agriculture appear to have universal application under a wide range of economic and social systems. Papers are grouped in the following five parts. I. Foundation and background in planning models (including discussion of decision models). II. Problems and potentials at the micro level (farm planning). III. Regional models of planning and development. IV. Experiments and experience with national planning models for agriculture. V. Formulation of national models. VI. Gaps between plans and realization and practical possibilities for improvement performance. Although some of the socialist countries participating could well be classed developing countries, it would seem that the mathematical techniques discussed have only a very limited possibility of application in the great majority of developing countries, if only because reliable statistics are usually lacking. It is to be expected, however, that with increasing levels of development, some of these techniques for regional, national and farm planning will become relevant in future in a number of such countries.

Royal Tropical Institute, Amsterdam

B. F. BLAND: Crop production: Cereals and Legumes pp. 466. Academic Press London and New York, 1971. Price: £ 5.00.

This book provides a clear and up to date view on modern production of cereals and legumes, with much emphasis on technical and technological details. It is primarily written for English students in Agriculture who cannot gain enough experience of the many crops in their pre-university practical year. Many others can profit from the rich contents with numerous tables and photographs for further orientation. For every crop there is a description of the history, development and botanical classification with many details. Its most conspicuous feature is actuality: cropping techniques, economics and harvesting methods, going as far as approximate costs of seed of different certification grades. Much attention is being paid to actual cultivars (varieties), to types of moisture meters, diagrams of drying equipment for cereals and very modern ways of harvesting of green peas, a.o. with mobile pea viners, illustrated by a series of photographs. A bank of electronic colour sorting machines used to separate discoloured seeds from samples of dried peas is shown.

The book is really up to date. Chemical weed control receives the place it deserves: the subject is treated thoroughly, zero tillage systems of farming with the aid of chemicals are described. Storage of high moisture grain in sealed silos or containers, narcotic baits for the control of damage by birds etc. Much information from leaflets of the Advisory Service and from similar sources is included, but literature references are mainly scientific rather than practical. For a reliable picture of English arable farming the lack of text parts on potatoes and sugar-beets is badly felt although it would have doubled the text. Since no data on acreages, yields and growth regions for cereals and legumes in the U.K. are provided, the book may prove insufficient for any soil scientist who wants to orientate on modern crop husbandry in England.

F. J. H. van Hiele
Agr. University, Wageningen

IRWIN REMSON, GEORGE M. HORNBERGER AND FRED J. MOLZ: Numerical methods in subsurface hydrology, with an introduction to the finite element method. Wiley-Interscience, New York, 1971. pp. 389, 51 figs., numerous references. Price: $ 8.—.

Application of mathematical methods with any degree of reality to hydrologic systems often requires numerical methods to obtain quantitative results, because they are non-linear or refer to regions of irregular shape. The present book is concerned with such methods for saturated or unsaturated groundwater flow.

Chapter 1 introduces the basis physical concepts of porosity and potential equations and boundary conditions for several situations. The discussions are restricted to those systems where Darcy's law is valid.

Chapter 3 is concerned with finite-difference methods for transient flow problems described by parabolic equations in one or two space dimensions. Connected is a discussion of stability and convergence. The concept of consistency is not mentioned. Especially for non-linear problems a description of predictor-corrector methods is included which avoids the solution of non-linear algebraic equations.

Chapter 4 is concerned with a review of available finite-difference methods for the elliptic equations related to steady flow. Non-linear problems are included, as well as the treatment of irregular boundaries.

Both of the preceding chapters result in systems of linear or non-linear algebraic equations. The solution of these, mainly by iterative methods, is discussed in Chapter 5. Several important results are stated without proof; yet the chapter gives a good survey of the state of the art. It ends with a discussion of the rather recent "strongly implicit" (SIP) method.

Chapter 6 has a rather different and less general point of view in discussing similarity transformation which reduce the differential equations into ordinary ones, solved mainly by special-purpose methods.

Finally Chapter 7 gives an introduction to the finite-element method which will serve very well to acquaint the interested reader with the method in general mathematical terms. Yet little details are given about the practical application of the method.

In judging the value of this book reviewer had some difficulty in realizing the type of reader it is intended for. The treatment requires little prior familiarity

with the subject but, on the other hand, aimes at a complete treatment within a limited space. This has obliged the authors to maintain a somewhat sketchy style which may be a drawback for practicing hydrologists without a great numerical experience. Because of this the book has the character of a survey rather than that of a textbook.

A second point of criticism is that the attention appears to have been directed more to the numerical than to the hydrologic aspects, referred to in the title. This is illustrated by the general lack of practical applications to hydrological problems. In Chapter 4, 5 and 7 examples are even missing at all. Several theoretical results are mentioned without discussing their relevance in hydrologic applications. This is rather disappointing because exactly this practical experience would render the book very valuable. Chapter 6 does give examples but these are illustrative mainly for the similarity transformations. The only way to get access to the practical applications is through the (in itself very valuable) list of published results given in Appendix 2.

As a conclusion it must be stated that the authors have missed the opportunity to compile practical experience with numerical methods in subsurface hydrology. They limited themselves to a survey of available mathematical methods. Nevertheless, considered as a survey with an extensive and up-to-date list of references, the book can be a valuable source of inspiration for those already having some experience.

C. B. Vreugdenhil
Delft Hydraulics Laboratory

R. A. OLSEN: Editor-in-Chief. Fertilizer Technology & Use, 2nd ed. pp. 611 Publ. Soil Science Society of America, Inc. Madison, Wisc. USA. Price Members ASA $ 8.00; nonmembers $ 10.00 + $ 0.50 postage outside USA.

In 12 chapters each composed by specialists of great reknown this textbook has been updated since its first edition in 1962. Much new material reflecting the development in fertilizer technology has been added.

Among significant new technologies introduced in this volume are development and current status of the fertilizer solutions industry; advanced modes of transport including pipeline distribution of fertilizers; development and role of delayed release fertilizer materials; and formulation and marketing of fertilizer-pesticide combinations.

Additional new and highly relevant chapters include a coverage of crop quality in relation to fertilizer use; the prediction of crop nutrient requirements through soil and foliar analyses; the behavior of fertilizers in acid, alkaline and flooded soils; the beneficial use of the tremendous quantities of waste products emanating from our complex modern society as fertilizer supplements by undergoing "depollution" in soil; and a thorough scientific treatise on the potential role of fertilizers as pollutants.

All of these innovations should prove invaluable to the student of fertilizer technology and to the industry representative who is in daily contact with those who buy the product, as well as to the activists who would have us dispense with chemical fertilizers in preference for a purely "organic" or "natural" system of soil fertility maintenance.

G. GEISLER: Pflanzenbau in Stichworten II. Die Ertragsbildung. Verlag Hirt, Kiel, 1971. pp. 142, 74 figs, 73 tables. Price: DM 14.80.

This crop production manual has been built around a number of key-terms selected from theoretical and practical production principles. It does not cover the whole field of production theory, but offers condensed expositions of the main properties of the production system, subdivided into general productivity, sprout performance and root activities. The different subjects hav been elucidated by graphs or tables with parameters or quantitative relations. Rotation effects have been regrettably omitted among the main factors affecting root and plant functions, but some air pollution effects have been included. The scientific material has been derived from studies on a great variety of cultivated plants, both from temperate and tropical regions.

F. J. H.* van *Hiele
Agr. University, Wageningen

PHILLIPSON, J. (editor). Methods of study in quantitative Soil Ecology: population, production, and energy flow. IBP Handbook No. 18, 1971. Blackwell Scientific Publications, Oxford and Edinburgh. Price £ 4.00 net.

This handbook aims to provide, within a single volume, information about widely applicable methods of study in quantitative soil ecology, particular attention being given to population, production and energy flow. No single approach or method is claimed superior to all others; information is provided but the final choice remains the prerogative of individual investigators. The subject matter ranges from total metabolism of the soil, through root growth and litter production, to heterotrophic organisms of the soil such as the microflora, protozoa, nematodes, oligochaets, molluses and various arthroped groups.

L. BAL
Soils Institute, Utrecht

ISHIZUKA, Y. Nutrient deficiencies of crops. Taipei (Taiwan), ASPEC Food & Fertilizer Technology Center, 1971. II, 112 pp. Tables. Figs. Coloured photos.

This book presents a comprehensive compilation of information on visual symptoms of nutritional disorders by mineral elements in many different crops. Chapter 1 gives background information, on the relative importance of diagnosis of mineral deficiencies and emphasizes further confirmatory evidence prior to application of curative measures. Chapter 2 briefly reviews the role of essential elements and subdivides these into major and trace elements. In chapter 3 and 4 the importance of preliminary diagnosis by visual symptoms is emphasized as it tends to narrow down the range of elements possibly causing the observed disorder. Steps in the diagnostic procedure are briefly discussed and involve considerations with respect to the time of crop inspection and the preliminary check at the problem field, amongst others, on the time of appearance of symptoms and the duration, pH of the soils, irrigation water and soil management practices. It is also important to obtain representative series of deficiency symptoms showing light to severe incidence. In chapter 5 morphological and physiological characteristics of crops are discussed as indicators of disorders. Attention is paid to the relationship between shoots and roots resulting from shortages of N, P, K, Ca, Mg and S and to the internal mobility of nutrients in plants. Chapter 6 offers basic morphological and physiological explanations of the characteristics of numeral deficiencies in plants as associated with the respective functions of N, P, K, S, Ca, Mg, Fe, Mn, Zn, B, Na, Cu and Mo in the plant. In chapter 7 specific symptoms are presented in colour plates of amongst others, rice, maize, leguminous forage crops, grasses, potatoes, Citrus-trees, pineapples, coconut palms, rubber and tea. Some basic information regarding the use of trace elements on soil and crops is discussed in chapter 8; attention is paid to absolute absence in the soil, low availability to plants and to imbalance. Many colour plates illustrate the text.

Royal Tropical Institute

NEW TRANSLATIONS FROM RUSSIAN

The Israel Program for Scientific Translations (I.P.S.T.) continues to publish new translations of Russian books which are of interest to soil scientists. Among the recent ones are the following:

RODE, A. A.. Podzol-forming process. IV + 387 pp., 97 tables, 11 figs, 1970, I.P.S.T., Jerusalem, $ 20.00.

We welcome the translation of Rode's classical monograph on podzolization from 1937. In addition to the long general discussions of weathering it contains many chemical analyses and calculations of losses resulting from soil development. The data are used to support his main conclusion that the podzolforming process involves the complete decomposition of the minerals present in the eluvial horizon, except of quartz, and the removal of the oxides in the soil solution.

PONOMAREVA, V. V., Theory of podzolization, VI + 309 pp., 91 tables, 38 figs, 1969, I.P.S.T., Jerusalem, $ 22.00 (together with the following volume).

This translation of a 1964 Russian monograph brings the review of the literature on podzolization up to the early sixties. It includes a discussion of criteria for the distinction of lessivage (clay migration) and podzolization (clay decomposition). *Ponomareva comes to the conclusion that lessivage remains unproven and that* criteria for dividing soils into podzolized and illimerized types are unreliable (p. 30). The bulk of the author's data treat podzolization on the basis of the humus fractionation scheme of Tiurin, as modified by her (p. 114). She concludes that podzolization (i.e. the A_2 horizon) is caused by Ca-poor unsaturated fulvic acids, whereas the A_1 horizon in sod-podzolic (lessivage) soils is due to the precipitation by Ca of the brown humic acids. The more acid fulvic fraction migrates downward and podzolizes the horizon below the A_1 (p. 261).

RODE, A. A., editor, Advances in the theory of podzolization and solodization. V + 90 pp., 1969, I.P.S.T., Jerusalem.

This is a collection of three articles from 1964, by Zonn and Karpachevskii, comparing a podzolic, sod-podzolic and grey forest soil, by Kaurichev and Nozdrunova, reporting seasonal changes of the redox potential and of Fe^{2+} in some gleyed soils, and by Rode, Yarilova and Rashevskaya, presenting interesting data of a solod profile from a closed depression in the Caspian Lowland. Their data suggest decomposition of clay minerals in the upper 32 cm, while feldspars are almost completely preserved. Algae are proposed as a possible agent of the decomposition.

BAZILEVICH, N. I., The geochemistry of soda soils. IV + 392 pp., 85 tables, 69 figs, 1970, I.P.S.T., Jerusalem, $ 17.00.

This is a very thorough study, originally published in 1965, of the salinization in the Barbara Lowland (West Siberia) — a vast poorly drained subsiding depression, between the Ob and Irtysh rivers, with a semiarid (precipitation 250 - 450 mm) continental climate. Influx of salts was mainly from the weathering products of surrounding mountains. The salt accumulation is distinguished by the presence of Na_2CO_3, sometimes in dominant amounts. The distribution of the salts in the various types of natural waters and soils, and their effect on the biomass are discussed in detail. The data are summarized in a descriptive table and a schematic map of the biochemical landscape.

IVANOVA, E. I., editor, Genesis and classification of semi-desert soils. 261 pp, 1970, I.P.S.T., Jerusalem, $ 13.00.

This is a collection of studies from 1966 on soils of the southern Caspian Lowland, between the rivers Volga and Ural, a dry semidesert with a precipitation of 150 - 200 mm. The first chapter deals with the natural environment of the region, and the subsequent ones deal systematically with the Brown Semidesert soils, Meadow-Brown Semidesert soils, Meadow soils, Solonetz soils and the eolian sands — each by different authors. The Brown Semidesert soils have a compact, prismatic B horizon, are usually decalcified in the upper horizon, or else contain negligible amounts of carbonates, and accumulate gypsum and other salts at the depth of moistening. About 25 % of the area is covered by sands.

ALIEV, G. A., Cinnamon Forest soils in the eastern part of the Greater Caucasus. IV + 76 pp., 22 tables, 17 figs., 1969, I.P.S.T., Jerusalem, $ 7.00.

The typical cinnamon soil, according to Russian writers, develops under a dry subtropical forest and scrub vegetation (mainly oak, associated with juniper, pistache, and hornbeam). Since it is often equated with soils of a Mediterranean climate in southeastern Europe, this description of Cinnamon Forest soils from Azerbaidhan, published in 1965, should be of considerable interest. According to Aliev, the solum in these soils is cinnamon coloured, with an inconspicuous humus horizon, though containing 3 to 8 % humus, a cloddy structure, decalcified to a depth of about 60 cm, clayey, and base saturated but with no indication of transformation of the main mineral constituents. Mountain, steppe-transformed, horticultural and meadow subtypes are recognized.

On the basis of the evidence presented we cannot but agree with the book's preface that "the concept of Cinnamon Forest soils still remains debatable".

* * *

This collection of pedological monographs is a valuable addition to the soil geographical literature. It gives a fair though a somewhat delayed picture of Soviet pedology.

The books suffer from the usual drawbacks of Russian texts and of their translations. Documentation and references are incomplete, illustrations are of poor quality and there are no indexes. Some of the translations use awkward expressions, obviously attempting to find precise analogues for each technical term and neologism of the Russian language. Shorter sentences could, however, make the text more readable without any loss in accuracy.

A perusal of the bibliographies in these books indicates scant acquaintance with the non-russian periodic literature by Soviet workers. However, it seems that in Russia major books are translated within a year or two after their appearance in the West. Since by now a large part of the classical Russian pedological literature has been translated, an effort should be made to publish translations of important new monographs, as those above, immediately after their appearance and to reduce the delay of four or five years. By far the largest part of soil scientists remain dependent on translations as the only way to become acquainted with foreign literature. The books should be found in every soil science library.

D. H. Yaalon

Standard Soil Color Chart

published by
Fujihira Industry Co. Ltd.
Tokyo, Japan

Official price $ 13.50 f.o.b. Tokyo

SPECIAL PRICE FOR MEMBERS ONLY
12.— US-DOLLARS, POST FREE
TO BE PAID IN ADVANCE

Send your order to:
Office of the Secretary-General of the I.S.S.S.
63 Mauritskade, Amsterdam, Netherlands

The price had to be adapted to change in foreign currency exchange rates

Second, Third and Fourth Commission.

Meeting in KÖNIGSBERG, July 1936. 1937. Erster Bericht. 188 pp. ill. roy. 8vo *German text, with a summary in English and French.* (8 guilders) 5.05 guilders

Zweiter Bericht über die Arbeiten und über die Tagung der Arbeitsgemeinschaft zur Prüfung der Laboratoriumsmethoden für die Bestimmung des Kali- und Phosphorsäurebedürfnisses der Böden, Stockholm, 5 Juli 1939. VII and 56 pp. roy. 8vo. 2.10 guilders

Third Commission.

Meeting in NEW BRUNSWICK, New Jersey, U.S.A., August 30-September 1 1939 Vol. A. and B. together 248 pp. with ill. roy. 8vo. 6.30 guilders

Fourth Commission (for the study of Soil Fertility).

Meeting in KÖNIGSBERG, July 1929. 1930. 156 pp. with many fig. roy. 8vo *German text, with a summary in English and French.* (6 guilders) 3.80 guilders

Transactions of the fourth commission, Stockholm, 3-8 July 1939. 130 pp roy. 8vo. 3.15 guilders

Fifth Commission (for Soil Genesis, Morphology and Cartography).

Meeting in WIEN, August-September 1937. 56 pp. 8vo. *German text.* 2.10 guilders

Sixth Commission (for the Application of Soil Science to Land Amelioration).

Meeting in GRONINGEN, July 1932. Vol. A. 1932 and Vol. B. 1933. Together 758 pp. with numerous ill. roy. 8vo. (15 guilders) 12.60 guilders

Meeting in ZÜRICH, August 1937. Vol. A. 1937 and Vol. B. 1938. Together 644 pp. with numerous ill. and tables. roy. 8vo 11.55 guilders

---

SOVIET SECTION.

First Commission. Moscow. 1933 Vol. A, 1. The Problem of Soil Structure 132 pp. 8vo. *Text in English.* (4 guilders) 2.95 guilders

First Commission. Moscow. 1934. Vol. A, 2 Problèmes de la physique du sol 182 pp. with numerous ill. 8vo. *Text in French.* (7 guilders) 4.20 guilders

Second Commission. Moscow. 1934. Vol. A, 1. Bodenchemie in der UdSSR 124 pp. 8vo. *Text in German.* (4 guilders) 2.95 guilders

Third Commission. Moscow 1933. Vol. A. Soil Microbiology in the USSR 166 pp. 8vo. (6 guilders) 3.80 guilders

Fourth Commission. Moscow. 1933. Vol. II. Bodenfruchtbarkeit und Anwendung der Dünger in der UdSSR. 254 pp. 8 vo. (7 guilders) 5.25 guilders

Fifth Commission. Moscow. 1935. Vol. A. 1. Classification, Geography and Cartography of Soils in USSR. 192 pp. 8 vo. (7 guilders) 4.40 guilders

Sixth Commission. Moscow. 1932. Vol. A. Russian Part of the Meeting in Groningen. 112 pp. 8vo. (4 guilders) 2.95 guilders

Papers for the Third International Congress of Soil Science. Oxford. Moscow. 1935. Vol. A. Pedology in USSR. 224 pp. 8vo. (7 guilders) 5.05 guilders

---

ACTES de la IVme Conférence Internationale de Pédologie. Rome, Mai 1924. 1926.

3 volumes et supplément. 1816 pp. nombreuses illustr. roy. 8vo. florins 23.10

CONTENTS: Organisation. Reports. General Conferences. — *Commissions* I and II. Soil Mechanics, Physics and Chemistry. — *Commissions III-VI.* Soil Bacteriology and Biochemistry. Soil Nomenclature, Classification and Cartography. Plant Physiology in connection with Soil Science. Appendix — *Supplement.* Indexes. *Text in French.*