AIC S-L

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
CENTRE DE RECHERCHES POUR LE DEVELOPPEMENT INTERNATIONAL
CANADA

Publications
Publicaciones

june 1978
juin 1978
junio 1978

The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to support research designed to adapt science and technology to the needs of developing countries. The Centre's activity is concentrated in five sectors: agriculture, food and nutrition sciences; health sciences; information sciences; publications; and social sciences. IDRC is financed solely by the Government of Canada; its policies, however, are set by an international Board of Governors. The Centre's headquarters are in Ottawa, Canada. Regional offices are located in Africa, Asia, Latin America, and the Middle East.

Le Centre de recherches pour le développement international, société publique créée en 1970 par une loi du Parlement canadien, a pour mission d'appuyer des recherches visant à adapter la science et la technologie aux besoins des pays en voie de développement; il concentre son activité dans cinq secteurs: agriculture, alimentation et nutrition; information; santé; sciences sociales; et publications. Le CRDI est financé entièrement par le Gouvernement du Canada, mais c'est un Conseil des gouverneurs international qui en détermine l'orientation et les politiques. Établi à Ottawa (Canada), il a des bureaux régionaux en Afrique, en Asie, en Amérique latine et au Moyen-Orient.

El Centro Internacional de Investigaciones para el Desarrollo, CIID, es una corporación pública creada por el Parlamento del Canadá en 1970 con el fin de auspiciar la investigación que tenga por objeto adaptar la ciencia y la tecnología a las necesidades propias de los países en vía de desarrollo. La actividad del Centro se concentra en cinco áreas: ciencias de la agricultura, alimentos y nutrición; ciencias de la salud; ciencias de la información; publicaciones; y ciencias sociales. El CIID está financiado únicamente por el Gobierno del Canadá; sinembargo, sus políticas son establecidas por un Consejo de Gobernadores de carácter internacional. El CIID tiene su sede en Ottawa, Canadá, y cuenta con oficinas regionales en Africa, Asia, Latinoamérica y el Medio Oriente.

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How to Order

Free publications are available on request from IDRC headquarters, or from any of the IDRC regional offices. Requests for priced publications should be directed to the appropriate sales agent listed below. Please note that orders addressed to IDRC must be accompanied by payment in full (Canadian exchange). Prices are subject to change without notice.

Comment obtenir les publications

Pour les publications gratuites, en faire la demande au siège du CRDI ou à l'un de ses bureaux régionaux. Pour les publications payantes, les commander directement à l'un des dépositaires ci-dessous, s'il y a lieu, ou au CRDI dans les autres cas. À noter que les commandes adressées au CRDI sont payables d'avance, en devises canadiennes. Les prix sont susceptibles de modifications sans préavis.

Solicitudes

Las publicaciones de distribución gratuita pueden solicitarse a la sede del CIID, o a cualquiera de las oficinas regionales del Centro. Las demás publicaciones pueden solicitarse a cualquiera de los distribuidores de la lista que aparece enseguida. Aquellos pedidos que se hagan directamente al CIID deberán ir acompañados de la suma indicada (en moneda canadiense). Los precios están sujetos a cambios sin previo aviso.

SALES AGENTS
DÉPOSITAIRES
DISTRIBUIDORES

Canada:

Renouf Publishing Co Ltd
61 Sparks Street
Ottawa, Ontario
K1P 5A5

USA:

UNIPUB
Box 433, Murray Hill Station
New York, N.Y. 10016

other:
autres pays:
otros paises:

IDRC
Publications Distribution Unit
P.O. Box 8500
Ottawa, Canada
K1G 3H9

Requests from Developing Countries

Special consideration is given to requests from libraries, institutions, researchers, and administrators in developing countries. A brief description of research and development activities aids IDRC in answering requests fully.

Requests from Africa, Asia, and Latin America should be directed to the nearest regional office.

Demandes émanant des pays en voie de développement

Il sera accordé une attention toute particulière aux demandes émanant de bibliothèques, d'établissements, de services officiels ou de chercheurs des pays en voie de développement. Les intéressés sont invités à donner toutes précisions utiles sur leurs activités.

N.B. En Afrique, en Asie et en Amérique latine, prière de passer par le bureau régional le plus proche.

Solicitudes de Paises en Desarrollo

Los pedidos hechos por bibliotecas, instituciones, investigadores y administradores de países en vias de desarrollo, recibirán una atención especial. Una breve descripción de los proyectos de investigación o desarrollo ayudará al CIID a llenar los pedidos de manera completa.

Los pedidos provenientes de Africa, Asia, y América Latina deben enviarse a la oficina regional del CIID mas próxima.

Asia
Asie
Asia

IDRC
Asia Regional Office
Tanglin P.O. Box 101
Singapore 10, SINGAPORE

East Africa
Afrique de l'Est
Africa Oriental

IDRC
East Africa Regional Office
P.O. Box 30677
Nairobi, KENYA

Latin America and Caribbean **Antilles et Amérique latine** **América Latina y el Caribe**	CIID Oficina Regional América Latina Apartado Aéreo 53016 Bogotá, D.E., COLOMBIA S.A.
Middle East and North Africa **Moyen-Orient et Maghreb** **Oriente Medio**	IDRC Middle East and North Africa Regional Office 5 Latif Mansour Street Heliopolis, Cairo, EGYPT
West Africa **Afrique de l'Ouest** **Africa Occidental**	CRDI Bureau régional pour l'Afrique de l'Ouest B.P. 1107 CD Annexe Dakar, SÉNÉGAL

ANIMAL SCIENCES
ZOOTECHNIE
CIENCIAS AGROPECUARIAS

Theileriosis: report of a workshop held in Nairobi, Kenya, 7-9 December 1976

J. B. Henson and
Marilyn Campbell, editors
Ottawa 1977 IDRC-086e 112p.
ISBN: 0-88936-124-X $7.50

Report of a workshop on theileriosis, a tick-borne parasitic animal disease occurring in Africa and the Middle East. This report examines the effects of the disease on cattle production, various means of effective disease control, and the incidence of disease in other species of Bovidae. It discusses research activities and the need for scientific cooperation and information dissemination. Recommendations are included.

CROPS AND CROPPING SYSTEMS
CULTURES ET SYSTÈMES CULTURAUX
CULTIVOS Y SISTEMAS DE CULTIVO

Triticale: proceedings of an international symposium, El Batan, Mexico, 1-3 October 1973

Reginald MacIntyre and
Marilyn Campbell, editors
Ottawa, 1974 IDRC-024e 250p.
ISBN: 0-88936-028-6 $10.00

Comprehensive review of the state-of-the-art of triticale breeding and important on-going research programs. Papers discuss research programs in various countries, including genetic experiments, nutritional studies, triticale diseases, agronomy and physiology, and major development problems and prospects.

Cassava processing and storage: proceedings of an interdisciplinary workshop, Pattaya, Thailand, 17-19 April 1974

E. V. Araullo, Barry Nestel, and
Marilyn Campbell, editors
Ottawa, 1974 IDRC-031e 125p.
ISBN: 0-88936-036-7 $8.75

Topics discussed include cultivation, chip and pellet

processing, storage and other postharvest problems, utilization, marketing prospects, production and export control, and the state of the industry in India, Indonesia, Malaysia, the Philippines, Sri Lanka, and Thailand.
(A Thai translation of this monograph is available in limited quantities from: Dr Somboon Vatanosombut, Secretary-General, Thai Tapioca Trade Association, Tai-Wah Co. Ltd., 21 Satorn Road, Bangkok, Thailand.)

Current trends in cassava research

Barry L. Nestel
Ottawa, 1974 IDRC-036e 32p.
ISBN: 0-88936-041-3 $3.00

Reviews recent literature and research on cassava utilization as human and animal food, enrichment, toxicity, industrial use, economics of production, genetic improvements, pests and diseases, production yields, and development of cassava information services.

Triticale: resúmenes de los ensayos presentados durante un simposio internacional, El Batán, México, 1 al 3 de octubre de 1973

CIID
Ottawa, 1975 IDRC-040s 31p.
ISBN: 0-88936-049-9

Los temas centrales que ocuparon este evento fueron: programas de investigación sobre triticale en los países desarrollados, nuevos programas emprendidos en los países en desarrollo, y problemas que se presentan en las diversas etapas de la producción, mejoramiento y cultivo del cereal.

The international exchange and testing of cassava germ plasm: proceedings of an interdisciplinary workshop held at CIAT, Palmira, Colombia, 4-6 February 1975

Barry Nestel and
Reginald MacIntyre, editors
Ottawa, 1975 IDRC-049e 74p.
ISBN: 0-88936-062-6 $5.00

Proposes guidelines for international testing, evaluation, and exchange of existing and new cassava plant varieties. Includes situation papers on current cassava production and research in 11 Asian and Latin American countries.

Pruebas e intercambio internacional de germo-plasma de yuca: Exposiciones presentadas durante el evento

interdisciplinario en la sede del CIAT, Palmira, Colombia, 4 a 6 de febrero de 1975

Barry Nestel, editor
Bogotá, 1976 IDRC-049s 85p.
ISBN: 0-88936-080-4

Edición hecha por Barry Nestel y Reginald MacIntyre de los trabajos presentados en el evento internacional que sobre el tema se celebró, con apoyo del CIID, en el Centro Internacional de Agricultura Tropical en Cali, Colombia, febrero de 1975. Ordenado en tres secciones, el libro ofrece en la primera el resumen de las presentaciones por países, en la segunda las intervenciones por temas, y en la tercera el sumario de las discusiones del simposio y las conclusiones.

Cassava: the development of an international research network

Barry Nestel and
James Cock
Ottawa, 1976 IDRC-059e 70p.
ISBN: 0-88936-076-6 $5.00

Describes in detail the extensive program of research being carried out on cassava. The report focuses on the activities of the International Centre of Tropical Agriculture (CIAT) in Colombia, The International Institute of Tropical Agriculture (IITA) in Nigeria, and various other research groups.

The international exchange and testing of cassava germ plasm in Africa: proceedings of an interdisciplinary workshop held at IITA, Ibadan, Nigeria, 17-21 November 1975

Eugene R. Terry and
Reginald MacIntyre, editors
Ottawa, 1976 IDRC-063e 59p.
ISBN: 0-88936-082-0 $3.00

Proceedings of a seminar on agricultural research on cassava germ plasm in Africa. Discusses plant breeding activities, examination of plant diseases, and their control. A bibliography is also included.

African cassava mosaic: report of an interdisciplinary workshop held at Muguga, Kenya, 19-22 February 1976

Barry L. Nestel, editor
Ottawa, 1976 IDRC-071e 48p.
ISBN: 0-88936-096-0 $4.00

This workshop discusses the use and potential of cassava as a food and cash crop, cassava viruses, mosaic agents, screening and quarantine, symptoms and

control of mosaic disease, and breeding for resistance.

Intercropping in semi-arid areas: report of a symposium held at the Faculty of Agriculture, Forestry and Veterinary Science, University of Dar es Salaam, Morogoro, Tanzania, 10-12 May 1976

J. H. Monyo, A. D. R. Ker, and Marilyn Campbell, editors
Ottawa, 1977 IDRC-076e 72p.
ISBN: 0-88936-107-X $5.00

Report of a symposium on intercropping in semi-arid zones in the tropical zone, with an examination of agricultural research activities. Examines the effects of intercropping on crop plant production. Includes research results and a list of participants.

Proceedings of the fourth symposium of the International Society for Tropical Root Crops held at CIAT, Cali, Colombia, 1-7 August 1976

James Cock, Reginald MacIntyre, and Michael Graham, editors
Ottawa, 1977 IDRC-080e 277p.
ISBN: 0-88936-115-0 $12.00

Proceedings of a symposium on root crop plant production in the tropical zone. Included are sections on origin, dispersal, and evolution of root and tuber crops, basic productivity, preharvest and postharvest losses, and utilization. Also provides a summary of discussions, list of participants, bibliography, and statistical data.

Resúmenes de los trabajos presentados durante el cuarto simposio de la Sociedad Internacional de Raíces Comestibles Tropicales celebrado en el CIAT, Cali, Colombia, 1-7 agosto 1976

James Cock, Reginald MacIntyre y Michael Graham, editores
Bogotá, 1977 IDRC-091s 60p.
ISBN: 0-88936-134-7

Resúmenes de los trabajos presentados sobre los cuatro temas centrales del simposio: origen, dispersión y evolución, productividad básica, pérdidas pre y post-cosecha, y utilización de las raíces tropicales.

Cassava as animal feed: proceedings of a workshop held at the University of Guelph, 18-20 April 1977

Berry Nestel and Michael Graham, editors
Ottawa, 1977 IDRC-095e 147p.

ISBN: 0-88936-142-8 $8.75

Compilation of workshop papers on the use of cassava-based feeds. Discusses methionine amino acid supplementation of cassava diets, metabolic pathways and their significance in animal nutrition, single-cell protein production, animal feeding systems for swine, poultry, and cattle, and feed production techniques such as pelleting. Includes a list of participants.

Cassava bacterial blight: report of an interdisciplinary workshop held at IITA, Ibadan, Nigeria, 1-4 November 1976

Gabrielle Persley, Eugene R. Terry, and Reginald MacIntyre, editors

Ottawa, 1977 IDRC-096e 36p.
ISBN: 0-88936-143-6 $2.00

Discusses the diagnosis and geographic distribution of cassava bacterial blight disease in Africa south of the Sahara, the influence of shade and intercropping on its incidence, plant breeding for disease resistance, and disease control efforts in Nigeria, Zaire, and Ghana. Includes bibliography and list of participants.

Nutritional standards and methods of evaluation for food legume breeders

J. H. Hulse, K. O. Rachie, and L. W. Billingsley

Ottawa, 1977 IDRC-TS7e 100p.
ISBN: 0-88936-137-1 $6.00

Describes nutritional quality standards in legume plant breeding, including recommendations for standards of food composition. Also discusses physical and chemical analysis, food analysis, and biological evaluation techniques.

ECONOMIC AND SOCIAL DEVELOPMENT
DÉVELOPPEMENT ÉCONOMIQUE ET SOCIAL
DESARROLLO ECONÓMICO Y SOCIAL

Catastrophe or new society? A Latin American world model

Amilcar O. Herrera et al.

Ottawa, 1976 IDRC-064e 108p.
ISBN: 0-88936-083-9 $8.75

Examines problems facing the world today and seeks solutions based on the human capacity for change and

creativity. The world model proposed encompasses contemporary society, economic growth, the physical limits of development, population, health, food production, labour, energy, technology, pollution, housing, urbanization, and education.

Catástrofe o nueva sociedad? Modelo mundial Latinoamericano

A. Herrera y otros
Bogotá, 1978 IDRC-064s 128p.
ISBN: 0-88936-145-2

El libro plantea la factibilidad de una sociedad igualitaria compatible con su medio ambiente, como alternativa a la catástrofe predicha por algunos teóricos de los países desarrollados. A cargo de un equipo de científicos de la Fundación Bariloche de Argentina bajo la dirección de Amilcar Herrera, el trabajo fué financiado por el CIID y sus resultados publicados por éste tanto en inglés como en español.

EDUCATION
ÉDUCATION
EDUCACIÓN

Whilst time is burning: a report on education for development

J. Roby Kidd
Ottawa, 1974 IDRC-035e 121p.
ISBN: 0-88936-040-5 $7.50

Examines the reasons for the successes and failures of the educational schemes of the 1960s and considers a wide range of proposed improvements and alternatives to present educational systems, particularly in developing countries. Stresses the importance of education related to work or public service and the concept of basic educational entitlement.

Study-service — a survey

Diana Fussell and
Andrew Quarmby
Ottawa, 1974 IDRC-037e 43p.
ISBN: 0-88936-042-1 $3.50

An account of various study-service programs in developing countries, especially in Asia and Africa, that provide students with both useful education experiences and practical service to their communities.

Explains the goals, methods, contributions, and problems of these study-service schemes.

Les programmes "études-service"

Diana Fussell et
Andrew Quarmby
Ottawa, 1977 IDRC-037f 43p.
ISBN: 0-88936-108-8 $3.50

Enquête sur les programmes études-service organisés dans le cadre du système d'enseignement formel où les étudiants participent au développement communautaire des collectivités rurales en Afrique et en Asie.

Education research priorities: a collective view

IDRC
Ottawa, 1976 IDRC-068e 26p.
ISBN: 0-88936-092-8 $1.50

Assesses the current state of education research in developing countries, and suggests additional research support, so that more relevant education can be provided more efficiently to larger numbers of people despite severe resource constraints.

Project Impact: a progress report on Innotech Project Impact in the Philippines and Proyek Pamong in Indonesia

Clyde Sanger
Ottawa, 1977 IDRC-088e 56p.
ISBN: 0-88936-129-0 $4.00

Report on a pilot project being conducted in the rural areas of the Philippines and Indonesia to improve the delivery system of primary education. Discusses the role of the project in community development and examines the use of programed instruction, changes in the physical layout of schools, role of the teacher, and the workings of the tutorial system. Includes learning and cost-effectiveness comparisons.

FAMILY PLANNING
ORTHOGÉNIE
PLANIFICACIÓN FAMILIAR

Family planning in Colombia: changes in attitude and acceptance, 1964-69

Alan B. Simmons and
Ramiro Cardona G.
Ottawa, 1973 IDRC-009e 30p.
ISBN: 0-88936-011-1 $3.50

Evaluates the first temporal analysis of family planning adoption in a major Latin American city. Focuses on the changes in knowledge, attitudes, and practices of contraception in a population in Bogota, Colombia, and the spread of contraceptive knowledge and practice to rural areas.

Role of traditional birth attendants in family planning: proceedings of an international seminar held in Bangkok and Kuala Lumpur, 19-26 July 1974

J. Y. Peng, Srisomang Keovichit, and
Reginald MacIntyre, editors
Ottawa, 1974 IDRC-039e 107p.
ISBN: 0-88936-045-6 $8.75

Papers analyze the characteristics of traditional birth attendants for Indonesia, Malaysia, the Philippines, and Thailand. The implementation, problems, and results of their family planning programs and their expected future role are also discussed.

Family planning in Mali

André Laplante, Faran Samaké, and
George F. Brown
Ottawa, 1975 IDRC-045e 12p.
ISBN: 0-88936-056-1 $1.50

Discusses the results and significance of the pilot project that led to the establishment of a national family planning program in Mali, integrated with its maternal and child health services.

FERTILITY
FÉCONDITÉ
FECUNDIDAD

Hypofécondité et infécondité en Afrique

CRDI
Ottawa, 1977 IDRC-075f 31p.
ISBN:0-88936-110-X $1.50

Rapport de séminaire sur l'étude des facteurs contribuant à l'hypofécondité et à l'infécondité en Afrique. Analyse les facteurs culturels et démographiques, les

aspects économiques, sociaux et psychologiques, et l'influence des maladies génétiques, des maladies infectieuses et des maladies vénériennes.

FISHERIES
PÊCHES
PESQUERIA

Stable tropical fish products: report on a workshop held in Bangkok, Thailand, 8-12 October 1974

Marilyn Campbell
Ottawa, 1975 IDRC-041e 27p.
ISBN: 0-88936-051-2 $4.25

Discusses programs for producing low-cost stable tropical fish products for human consumption from underutilized species. Includes 11 background papers on microfiche concerning this aspect of fish processing in the countries of South and Southeast Asia.

Tropical oyster culture: a selected bibliography

D. B. Quayle
Ottawa, 1975 IDRC-052e 40p.
ISBN: 0-88936-066-9 $3.50

Bibliography compiled to aid current research on improved techniques for the cultivation of tropical oysters. Also included are 267 references.

Biological synopsis of the manatee

K. Ronald, L. J. Selley, and E. C. Amoroso
Ottawa, 1978 IDRC-TS13e (in press)
ISBN: 0-88936-168-1 $6.00

All existing literature on the manatee is reviewed in this publication, and salient characteristics of the animal's biology, ethology, physiology, and ecology are highlighted. The accompanying bibliography represents the most complete record to date of literature on the manatee, including published works from as early as 1593 and as recent as 1977.

FOOD AND NUTRITION
ALIMENTATION ET NUTRITION
ALIMENTOS Y NUTRICIÓN

Nutritive value of triticale protein

Joseph H. Hulse and
Evangeline M. Laing
Ottawa, 1974 IDRC-021e 183p.
(casebound)
ISBN: 0-88936-025-1 $15.00

Comprehensive review of the literature, relative to the biological value of triticale, and of the protein of its parents, wheat and rye. Aimed at plant scientists, nutritionists, food scientists, technologists, and others, particularly in developing countries, where triticale may be grown and eaten.

Directory of food science and technology in Southeast Asia

E. V. Araullo, compiler
Ottawa, 1975 IDRC-023eR 267p.
(revised edition)
ISBN: 0-88936-027-8 $8.75

Provides a list of 650 research projects concerning food science and technology in progress at 68 research institutes in South and Southeast Asia. The Directory is arranged by country, institute, and project name, followed by an extensive subject index, and a list of the research institutes' holdings of over 300 food-related journals.

Food crop research for the semi-arid tropics: report on a workshop on the physiology and biochemistry of drought resistance and its application to breeding productive plant varieties, University of Saskatchewan, Saskatoon, Canada, 22-24 March 1973

Michael Brandreth
Ottawa, 1974 IDRC-026e 16p.
ISBN: 0-88936-030-8 $1.50

Reports on the physiology and biochemistry of drought resistance and its application to breeding productive plant varieties. Topics discussed include hormonal interaction, root/shoot translocation, morphology, growth-stage response to environmental factors, tissue stress resistance, and simulation modeling.

Interaction of agriculture with food science: proceedings of an interdisciplinary symposium, Singapore, 22-24 February 1974

Reginald MacIntyre, editor
Ottawa, 1974 IDRC-033e 166p.
ISBN: 0-88936-038-3 $8.75

Review of the Asian food and agriculture situation.

Discusses crop improvement research on rice, crops of the semi-arid tropics, Asian root crops, and increased productivity through multiple cropping systems; quality control, postharvest rice protection, processing of cassava and food legumes, and food processing industries in Malaysia, India, and Singapore.

Cowpeas: home preparation and use in West Africa

Florence E. Dovlo, Caroline E. Williams, and Laraba Zoaka
Ottawa, 1976 IDRC-055e 96p.
ISBN: 0-88936-071-5 $5.00

Contains 55 cowpea recipes ranging from babyfood to crepes. Includes valuable information on the nutritional and economic value of cowpeas, techniques for their preparation, processing equipment and methods, and storage. Illustrated.

Food production in India: a perspective

W. David Hopper
Ottawa, 1976 IDRC-066e 30p.
ISBN: 0-88936-089-8

Speech on the evolution of grain food production in India and the obstacles to her agricultural development. Discusses the hopes and limitations of the "Green Revolution," the effects of food aid on agricultural production, modernization, and trends in India's agricultural development.

The politics of food

W. David Hopper
Ottawa, 1977 IDRC-100e 24p.
ISBN: 0-88936-153-3

Address on the political aspects of food production and supply. Discusses the effects of political power, agricultural policy, and rural development on production, particularly within developing countries; international relations, international cooperation, food aid, and the New International Economic Order.

Politique et alimentation

W. David Hopper
Ottawa, 1977 IDRC-100f 24p.
ISBN: 0-88936-158-4

Communication sur les aspects politiques de la production alimentaire et des disponibilités alimentaires. Discute l'influence du pouvoir politique, de la politique agricole et du développement rural sur la

production, particulièrement dans les pays en voie de développement; les relations internationales; la coopération internationale; l'aide alimentaire; et le Nouvel ordre économique international.

Food legume processing and utilization (with special emphasis on application in developing countries)

Alvin Siegel and Brian Fawcett
Ottawa, 1976 IDRC-TS1e 88p.
ISBN: 0-88936-086-3 $5.00

Discusses trends in legume food production processing in the home and at the commercial level, food preparation, new processing technologies, and processed legume by-products. Includes bibliography and statistical data.

Transformation et utilisation des légumineuses alimentaires (application particulière aux pays en développement)

Alvin Siegel et Brian Fawcett
Ottawa, 1978 IDRC-TS1f 63p.
ISBN: 0-88936-123-1 $5.00

Étudie les tendances de la production alimentaire des légumineuses, la transformation domestique et commerciale, la préparation des aliments, la nouvelle technologie alimentaire et l'utilisation des sous-produits des légumineuses. Comprend une bibliographie et des données statistiques.

FORESTRY
SYLVICULTURE
SILVICULTURA

Durabilité naturelle et préservation de cent bois tropicaux africains

Yves Fortin et
Jean Poliquin
Ottawa, 1974 IDRC-017f 143p.
ISBN: 0-88936-021-9 $8.75

Rassemble, sous forme de tableaux synoptiques, toutes les études, publiées ou non, traitant de la durabilité naturelle et de la préservation des bois tropicaux africains. Comprend un index des espèces étudiées qui donne le nom botanique et le nom pilote de ces dernières ainsi qu'une bibliographie comprenant plus de 250 articles.

Natural durability and preservation of one hundred tropical African woods

Yves Fortin and
Jean Poliquin
Ottawa, 1976 IDRC-017e 131p.
ISBN: 0-88936-090-1 $8.75

Assembles, in the form of synoptic charts, all available published or unpublished studies on the durability and artificial preservation of 100 of the most important African woods. Includes indexes to botanical and common names and a 250-item bibliography.

Trees, food, and people: land management in the tropics

J. G. Bene, H. W. Beall,
and A. Côté
Ottawa, 1977 IDRC-084e 52p.
ISBN: 0-88936-121-5 $3.50

Describes forestry development in the tropical zone, ecological implications, and the need for improved forest management and overall land utilization. Discusses forest ecosystem, sequential cultivation system of growing trees and food crops, reforestation, exploitability of forest resources, forest production and research needs, agrisilviculture, and establishment of the International Council for Research in Agroforestry.

Les arbres dans l'aménagement des terres sous les tropiques: une solution à la faim

J. G. Bene, H. W. Beall
et A. Coté
Ottawa, 1978 IDRC-084f (chez l'imprimeur)
ISBN: 0-88936-169-X $3.50

Traite du développement forestier en zone tropicale, de l'écosystème forestier, des systèmes de culture successive, de l'exploitabilité des ressources forestières, de l'intégration de la foresterie, de l'agriculture et de l'élevage. Propose la fondation d'un Centre international de recherche en agroforesterie qui a été créé par la suite.

Trees for people: an account of the forestry research program supported by the International Development Research Centre

Clyde Sanger, Gilles Lessard,
and Gunnar Poulsen
Ottawa, 1977 IDRC-094e 52p.
ISBN: 0-88936-139-8

Describes the background and objectives of projects

involving afforestation, reforestation, and the use of shelterbelts in land reclamation; establishment of man-made forests and village wood lots; use of certain tree species in animal feed production; agricultural aspects of forest utilization; and the use of tropical timber as building material.

Des arbres pour les hommes

Clyde Sanger, Gilles Lessard
et Gunnar Poulsen
Ottawa, 1978 IDRC-094f (chez l'imprimeur)
ISBN: 0-88936-161-4

Décrit l'histoire et les objectifs de projets de boisement, de reboisement, de récupération des terres grâce à la mise en place de brise-vent; traite aussi de l'établissement de forêts et de bois de village, de l'utilisation de diverses espèces d'arbres pour la production de fourrage, des aspects agricoles de l'exploitation des forêts et de l'utilisation de bois tropicaux comme matériaux de construction.

HEALTH CARE DELIVERY
SYSTÈME MÉDICO-SANITAIRE
PRESTACIÓN DE SERVICIOS DE SALUD

Health care in the People's Republic of China: a bibliography with abstracts

Shahid Akhtar
Ottawa, 1975 IDRC-038e 182p.
ISBN: 0-88936-044-8 $12.00

A bibliography of 560 books issued outside of China from 1949 to 1974. Includes abstracts, primarily in English, and sources of information on Chinese documents, addresses of selected authors and institutions, and author and subject indexes.

Low-cost rural health care and health manpower training: an annotated bibliography with special emphasis on developing countries (Volume 1)

Shahid Akhtar
Ottawa, 1975 IDRC-042e 165p.
ISBN: 0-88936-051-0 $8.75

Low-cost rural health care and health manpower

training: an annotated bibliography with special emphasis on developing countries (Volume 2)

Frances M. Delaney
Ottawa, 1976 IDRC-069e 182p.
ISBN: 0-88936-093-6 $8.75

Low-cost rural health care and health manpower training: an annotated bibliography with special emphasis on developing countries (Volume 3)

Frances M. Delaney
Ottawa, 1977 IDRC-093e 187p.
ISBN: 0-88936-138-X $8.75

A series of annotated bibliographies published from the IDRC's computerized data base of nontraditional methods of delivering health care, and the training and use of auxiliary health workers in remote regions of developing countries.

Doctors and healers

Alexandre Dorozynski
Ottawa, 1975 IDRC-043e 64p.
ISBN: 0-88936-052-9 $3.25

Highlights some of the problems that have prevented attainment of affordable health services in developing countries — the monopoly of the medical profession, the inappropriateness of the Western model of health services, the "brain drain" — and examines some health care systems that have proven to be effective in developing countries.

Médecine sans médecins

Alexandre Dorozynski
Ottawa, 1975 IDRC-043f 64p.
ISBN: 0-88936-054-5 $3.25

Expose quelques-unes des difficultés qui ont entravé le développement de services de santé économiques dans les P.V.D. — la situation monopolistique de la profession médicale, l'incompatibilité de notre modèle de soins de santé avec les besoins de ces pays, la "fuite des cerveaux" — et examine plusieurs systèmes de soins médicaux qui ont été efficaces dans les pays en voie de développement.

Medicina sin doctores

Alexandre Dorozynski
Bogotá, 1976 IDRC-043s 64p.
ISBN: 0-88936-087-1

Altamente polémico y controvertible, este librito de

Alexandre Dorozynski plantea interrogantes sobre la conveniencia y efectividad de aplicar los modelos occidentales de servicios de salud en los países del Tercer Mundo, a la vez que describe novedosos ensayos alternativos a este patrón universal.

The delivery of health services in the People's Republic of China

Peter Wilenski
Ottawa, 1976 IDRC-056e 60p.
ISBN: 0-88936-072-3 $5.00

Presents an overview of China's medical care system, which places priority on preventive medicine, and which mobilizes the people themselves to undertake preventive work, utilizing traditional practitioners and remedies, and "barefoot" doctors. Describes how China's health education and services are integrated into the nation's political, economic, and social development.

Village health workers: proceedings of a workshop held at Shiraz, Iran, 6-13 March 1976

H. A. Ronaghy, Y. Mousseau-Gershman, and Alexandre Dorozynski, editors
Ottawa, 1976 IDRC-074e 48p.
ISBN: 0-88936-106-1 $3.25

Compilation of seminar papers on health services in rural areas of Iran, Nepal, the Philippines, Thailand, and Papua New Guinea, with emphasis on the training of auxiliary health workers.

Applied operational research: report of a seminar-workshop on applied research in public health, held at the University Centre for Health Sciences, Yaoundé, Cameroon, 6-11 December 1976

Alexandre Dorozynski, editor
Ottawa, 1977 IDRC-081e 27p.
ISBN: 0-88936-144-4 $1.00

Describes the use of operational research in the field of public health services, especially in Cameroon. Discusses different stages in the organization of research, particularly project selection, design, implementation, and evaluation.

Recherche: opération, application — déroulement d'un séminaire-atelier sur la recherche opérationnelle dans le domaine de la santé publique, tenu au centre

universitaire des sciences de la santé à Yaoundé, Cameroun, du 6 au 11 décembre 1976

Alexandre Dorozynski, rédacteur
Ottawa, 1977 IDRC-081f 27p.
ISBN: 0-88936-118-5 $1.00

Décrit les différentes étapes de l'organisation de la recherche, notamment l'évaluation, la sélection et l'élaboration des projets, leur méthodologie et leur mise en œuvre. Présente l'adoption des deux modèles de projet sur l'évaluation de la formulation et de l'utilisation du personnel médical et des médecins au Cameroun.

Rural health needs: report of a seminar held at Pokhara, Nepal, 6-12 October 1977

Moin Shah, Mathura P. Shrestha, and Marilyn Campbell, editors
Ottawa, 1978 IDRC-105e 64p.
ISBN: 0-88936-165-7 $3.00

Report on health services and needs in rural areas of Nepal, including information on the Nepal Health Manpower Development Research Project. Examines survey methodology and data collection procedures, the application of research results, and the role of applied social research in health planning.

Travelers to the tropics: guidelines for physicians

R. Dupuis, J. Keystone, J. Losos, and A. Meltzer
Ottawa, 1978 IDRC-106e (in press)
ISBN: 0-88936-166-5 $1.50

Guidelines for general practitioners, covering some of the more likely illnesses that may be encountered by travelers to tropical countries. Concentration is on the prevention, diagnosis, and therapy for parasitic diseases. Listed are the more common parasites and drug doses for effective treatment.

INFORMATION

INFORMATION

INFORMACIÓN

DEVSIS: the preliminary design of an international information system for the development sciences

DEVSIS Study Team

Ottawa, 1976 IDRC-065e 247p.
ISBN: 0-88936-084-7 $8.75

Explores existing development information services and proposes establishment of an international cooperative network linking national information systems. The technical characteristics of this proposed network are described in detail, including discussion of the creation and operation of the DEVSIS bibliographic file, the organizational structure, support programs, facilities, and costs.
(Une édition française, "DEVSIS: esquisse d'un système international d'information pour les sciences du développement", est publiée par l'Organisation de Coopération et de Développement Economiques, Paris, France.)
(La edición española, "DEVSIS: diseño preliminar de un sistema internacional de información para las ciencias del desarrollo", ha sido publicada por las Naciones Unidas, New York.)

Investigaciones en comunicación para el desarrollo rural en América Latina: bibliografía

Luis R. Beltrán S., Guillermo Isaza V.
y Fernando Ramírez Pardo
Bogotá, 1976 IDRC-078s 87p.
ISBN: 0-88936-111-8

Compilación especializada con el objeto de documentar la reunión de consulta convocada por el CIID sobre el tema en noviembre de 1976. El libro incluye una sección de autores corporativos con referencias domiciliarias a las fuentes institucionales.

Devindex Canada: Index to 1975 Canadian literature on economic and social development • Index de la littérature canadienne de 1975 sur le développement économique et social

Gisèle Morin-Labatut, editor / rédactrice
Ottawa, 1976 IDRC-079e,f 58p.
ISBN: 0-88936-112-6 $3.25

Annotated bibliography of material published in Canada during 1975 on social and economic development in developing countries as part of the DEVSIS project.
Bibliographie annotée des publications parues au Canada en 1975 traitant du développement socio-économique dans les pays en voie de développement. Travail réalisé dans le cadre du projet DEVSIS.

Devindex Canada: Index to 1976 Canadian literature on economic and social development • Index de la littérature canadienne de 1976 sur le développement

économique et social

Gisèle Morin-Labatut, editor / rédactrice
Ottawa, 1977 IDRC-098e,f 92p.
ISBN: 0-88936-150-9 $5.00

Annotated bibliography of material published in Canada during 1976 on social and economic development in developing countries as part of the DEVSIS project.
Bibliographie annotée des publications parues au Canada en 1976 traitant du développement socio-économique dans les pays en voie de développement. Travail réalisé dans le cadre du projet DEVSIS.

Sharing experience — DEVSIS: an information service for decision-makers

IDRC
Ottawa, 1977 IDRC-092e 20p.
ISBN: 0-88936-136-3

Discusses the role of DEVSIS in the dissemination of knowledge acquired in the process of development. Describes duplication of development efforts arising from inadequacies in the information field, compatibility of DEVSIS with INIS and AGRIS, organization of information services, and the establishment of national information centres.

Le partage du savoir — DEVSIS: un service d'information pour les responsables de la prise de décisions

CRDI
Ottawa, 1977 IDRC-092f 24p.
ISBN: 0-88936-141-X

Étudie le rôle de DEVSIS dans la diffusion des connaissances acquises au cours du processus de développement. Examine la duplication des efforts de développement causée par des imperfections dans le domaine de l'information; la compatibilité de DEVSIS avec INIS et AGRIS; l'organisation et les services d'information du réseau d'information proposé; et l'établissement de centres d'information au niveau national.

Compartiendo experiencias — DEVSIS: servicio de información para quienes toman decisiones

CIID
Bogotá, 1977 IDRC-092s 20p.
ISBN: 0-88936-151-7

Folleto explicativo del nuevo Sistema Mundial de Información sobre Ciencias del Desarrollo que actualmente se abre camino en las Naciones Unidas. Se

destacan aquí los beneficios que los países en desarrollo pueden derivar de tal sistema, así como los requisitos y el modo de participación en él.

Optical character recognition: use of OCR techniques in decentralized data collection for bibliographic information systems

H. W. Groenewegen and J. Marshall
Ottawa, 1976 IDRC-TS3e 96p.
ISBN: 0-88936-097-9 $5.00

Describes experiments that successfully demonstrate a technique for automatic reading of typed worksheets; and discusses the use of optical character recognition techniques in information systems such as INIS, AGRIS, and DEVSIS. Includes specifications for suitable equipment.

Evaluation of the CARIS pilot project

IDRC
Ottawa, 1977 IDRC-TS5e 32p.
ISBN: 0-88936-117-7 $1.50

Evaluation of the Current Agricultural Research Information System pilot project and its directory of research projects and centres in West Africa. Examines the effectiveness of data collecting and processing, information dissemination and services.

Évaluation du projet pilote CARIS

CRDI
Ottawa, 1977 IDRC-TS5f 32p.
ISBN: 0-88936-132-0 $1.50

Évaluation du projet pilote CARIS (un système d'information sur la recherche agricole en cours) et de son répertoire de projets de recherche et centres de recherche en Afrique occidentale. Etudie l'efficacité du rassemblement et du traitement des données, de la diffusion de l'information et des services d'information.

Remote sensing in the Sudan
Ottawa, 1978 IDRC-TS9e 36p.
ISBN: 0-88936-159-2 $2.00

Report on a remote-sensing pilot project in the Sudan, and the application of remote sensing in natural resources. Examines images obtained through aerial surveying from the Landsat communications satellite.

Information retrieval and library management: an interactive minicomputer system

Faye A. Daneliuk
Ottawa, 1978 IDRC-TS14e 16p.
ISBN: 0-88936-170-3 $1.00

Describes the background and feasibility study of the implementation of IDRC's bibliographic information system on a minicomputer. Discusses systems design and computer programing work done at IDRC. Bibliography included.

POPULATION
DÉMOGRAPHIE
POBLACIÓN

Développement national et politique en matière de population

George F. Brown
Ottawa, 1973 IDRC-007f 14p.
ISBN: 0-88936-009-X

Analyse le rapport entre politique démographique et développement économique; des modèles de population; et des projets de recherches sur la politique démographique.

POSTHARVEST TECHNOLOGY
TECHNOLOGIE POST-RÉCOLTE
TECNOLOGÍA POSTCOSECHA

Rice: postharvest technology [1]

E. V. Araullo, D. B. de Padua, and Michael Graham, editors
Ottawa, 1976 IDRC-053e 394p.
ISBN: 0-88936-067-7 $17.50

Comprehensive training manual provides recommendations for improving rice production, protection, processing, marketing, distribution, and use. Covers such topics as rice biology, standards for seed

[1] Available in Asia from:
Select Books Pte Ltd.
215, Tanglin Shopping Centre
2/F, 19, Tanglin Road
Singapore, 10

multiplication, inspection and grading, harvesting equipment and operations, drying and storage techniques, parboiling, milling, handling methods, agricultural management and cooperatives, and processing methods.

Hidden harvest: a systems approach to postharvest technology

David Spurgeon
Ottawa, 1976 IDRC-062e 36p.
ISBN: 0-88936-081-2 $3.00

Proposes a substantially greater investment in postharvest systems research in developing countries, because postharvest crop losses in many tropical countries exceed 30%. Describes the techniques and benefits of systems engineering, and analyzes a Nigerian project, wherein the systems approach effectively reduced grain losses.

La récolte retrouvée: pour une gestion intégrée des récoltes, de la moisson à la consommation

David Spurgeon
Ottawa, 1977 IDRC-062f 36p.
ISBN: 0-88936-116-9 $3.00

Propose un investissement accru dans la recherche sur la technologie post-récolte dans les pays en voie de développement puisque, dans nombre de pays tropicaux, les pertes dépassent souvent 30 p. 100. Décrit une approche systémique de la technologie post-récolte appliquée à un projet agricole au Nigeria qui a abouti à des résultats très probants.

Maiduguri mill project: grain milling and utilization in West Africa

IDRC
Ottawa, 1976 IDRC-TS2e 16p.
ISBN: 0-88936-085-5 $1.50

A report on a project that deals with the postharvest food-grain system in rural Nigeria. The project employs a systems approach whereby the various postharvest activities are combined to form a whole and to operate in unison.

Le projet de Maiduguri: mouture et utilisation des céréales et des légumineuses en Afrique de l'Ouest

CRDI
Ottawa, 1977 IDRC-TS2f 15p.
ISBN: 0-88936-114-2 $1.50

Un rapport sur un projet agricole pour l'amélioration de la technologie post-récolte du traitement du grain au Nigeria. Le projet met en œuvre une approche systémique par laquelle les diverses activités post-récolte sont associées pour former un tout fonctionnant harmonieusement.

RURAL DEVELOPMENT
DÉVELOPPEMENT RURAL
DESARROLLO RURAL

Rural development and political change

W. David Hopper
Ottawa, 1972 IDRC-008e 15p.
ISBN: 0-88936-101-3 $1.50

Discusses the role of political scientists in solving problems created by the introduction of new technologies and economic structures in developing countries.

Integrated approach to local rural development: report of an interdisciplinary seminar, Makati, Philippines, 31 March - 3 April 1975

Marilyn Campbell, editor
Ottawa, 1975 IDRC-051e 52p.
ISBN: 0-88936-065-0 $5.00
Discusses rural development projects, which utilize an integrated approach to agricultural cooperatives, nutrition, family planning, medical services, and education in Bangladesh, Colombia, Indonesia, Korea, Malaysia, the Philippines, and Thailand.

Venciendo las limitaciones a la producción del pequeño agricultor

H. G. Zandstra, K. G. Swanberg
y C. A. Zulberti
Bogotá, 1975 IDRC-058s 32p.
ISBN: 0-88936-075-8

Los autores relatan sus experiencias en el Proyecto de Desarrollo Rural del Oriente de Cundinamarca, Colombia, adelantado por el Instituto Colombiano Agropecuario (ICA) con auspicio financiero y técnico del CIID. El estudio, encaminado a diseñar una estrategia para el desarrollo y bienestar social del pequeño agricultor, comtemplaba entre otros objetivos el aumento de sus ingresos mediante el

incremento de la producción y productividad agropecuarias con nueva tecnología. La indentificación de limitaciones, tanto técnicas como institucionales, demuestra la necesidad de modificar las estructuras imperantes, principalmente en los sistemas de crédito y mercadeo.

The sociology of food

Ruth K. Zagorin
Ottawa, 1977 IDRC-099e 12p.
ISBN: 0-88936-152-5

Address on the interaction between social structures and rural development, and the effects on food production in developing countries. Discusses the social implications of agricultural modernization for traditional cultures, as well as attitudes of the rural community toward social change.

Approaches and priorities in rural research in India

V. S. Vyas
Ottawa, 1977 IDRC-TS4e 11p.
ISBN: 0-88936-113-4 $1.00

Describes factors to consider in conducting social surveys in rural areas in India. Discusses suitability of the survey technique, data collection, importance of the questionnaire format, limitations of the interview method, and applicability of the village studies. Includes directives for recording results.

RURAL-URBAN DYNAMICS
URBANISATION ET PROBLÈMES URBAINS
DINÁMICA RURAL-URBANA

Three strands of rope

Clyde Sanger
Ottawa, 1973 IDRC-012e 24p.
ISBN: 0-88936-014-6 $1.50

Examines the causes and consequences of migration of the Nepalese, both within Nepal and to foreign countries. Also discusses recent events in the areas of social and economic development, demography, malaria eradication and public health, transportation, agriculture, industry, and foreign aid.

Hawkers and vendors in Asian cities

IDRC
Ottawa, 1975 IDRC-044e 24p.
ISBN: 0-88936-053-7 $1.50

Discusses the role that street traders play in the distribution of food and other commodities to urban people in Indonesia, Malaysia, and the Philippines.

Hawkers in Southeast Asian cities: planning for the bazaar economy [1]

T. G. McGee and Y-M. Yeung
Ottawa, 1977 IDRC-083e 139p.
ISBN: 0-88936-120-7 $7.50

Comparative analysis of hawkers in Southeast Asian cities, their role in the urban retail marketing system, with an evaluation of current local government policies. Discusses the effect of various urbanization patterns on distributive networks; attitudes and locational and structural actions toward hawkers, economic aspects, and personal characteristics.

Social change and internal migration: a review of research findings from Africa, Asia, and Latin America [1]

Alan Simmons, Sergio Diaz-Briquets,
and Aprodicio A. Laquian
Ottawa, 1977 IDRC-TS6e 128p.
ISBN: 0-88936-133-9 $8.75

Review of research pertaining to internal migration and social change in Africa, Asia, and Latin America. Examines the limitations of current research, and includes information on the determinants and consequences of migration, the characteristics and motivation of migrants, development policy issues, and related research implications.

Cambio social y migración interna: reseña de hallazgos investigativos en América Latina

A. Simmons, A. Laquian
y S. Diaz-Briquets
Bogotá, 1978 IDRC-TS10s (in press)
ISBN: 0-88936-148-7

De la reseña general de la investigación sobre migraciones en los países del Tercer Mundo, realizada por A. Simmons, A. Laquian y S. Diaz-Briquets, el CIID publica ahora en español la parte correspondiente a Latinoamérica. El trabajo describe los diferentes enfoques sobre los movimientos de población en esta parte del mundo, señala los vacios existentes en su

[1] Available in Asia from: Select Books Pte Ltd., 215, Tanglin Shopping Centre, 2 / F, 19, Tanglin Road, Singapore, 10.

estudio y sugiere orientación para la investigación futura.

Évolution sociale et migration interne en Afrique

Alan Simmons, Sergio Diaz-Briquets
et Aprodicio A. Laquian
Ottawa, 1978 IDRC-TS11f 55p.
ISBN: 0-88936-160-6 $3.50

Examen des recherches relatives à la migration interne et au changement social dans les pays en voie de développement d'Afrique. Analyse les limites et défauts de la recherche actuelle; traite des causes et conséquences de la migration, des caractéristiques et de la motivation des migrants, des problèmes que pose la migration en matière de politique de développement, et de l'incidence des recherches connexes.

SCIENCE AND TECHNOLOGY POLICY
POLITIQUE SCIENTIFIQUE ET TECHNIQUE
POLÍTICAS DE CIENCIA Y TECNOLOGÍA

Centres d'étude des politiques technologiques en Afrique: rapport de la réunion CRDI / CEA sur la création de centres d'étude des politiques technologiques en Afrique, Ile-Ife, Nigeria, du 5 au 10 décembre 1973

CRDI
Ottawa, 1974 IDRC-027f 43p.
ISBN: 0-88936-032-4

Analyse le rôle des politiques technologiques et de la planification dans le développement; traite des recherches sur les politiques technologiques en Europe, en Amérique latine et en Amérique du Nord; et présente des échanges de vues sur les politiques technologiques et la planification dans certains pays africains.

The science and technology policy instruments (STPI) project

IDRC
Ottawa, 1975 IDRC-050e 12p.
ISBN: 0-88936-063-4

Describes the STPI research project, which is concerned with the implementation of science policies in developing countries. Discusses organization and objectives.

Andean pact technology policies

Junta del Acuerdo de Cartagena

Ottawa, 1976 IDRC-060e 58p.
ISBN: 0-88936-077-4 $3.50

Describes basic policy decisions made by the Andean Pact countries to develop an integrated technology policy that fulfills specific economic and social needs, and to attain technological autonomy for the region. Covers topics such as foreign investment, technology transfer, trademarks, patents, licencing agreements, royalties, and industrial property.

Technology policy and economic development: a summary report on studies undertaken by the Board of the Cartagena Agreement for the Andean Pact Integration Process

Junta del Acuerdo de Cartagena
Ottawa, 1976 IDRC-061e 108p.
ISBN: 0-88936-078-2 $5.00

Summarizes results of studies by the Board of the Cartagena Agreement on the relationships between technological development policy and economic and social progress. The report covers studies made in Europe, South America, and Asia on technology policy in various industries; the role of national institutions; finance, and taxation; and, in the Andean Pact countries, technology commercialization, consultancy needs and services, and the integration of technology and economic development.

Science and technology policy implementation in less-developed countries: the methodological guidelines for the STPI project

IDRC
Ottawa, 1976 IDRC-067e 78p.
ISBN: 0-88936-091-X $5.00

Describes methodology for the Science and Technology Policy Instruments project, the principle objective of which is to devise a means whereby a country's investment in science and technology can be most effectively integrated with its industrial development goals.

SOIL SCIENCES
PÉDOLOGIE
SUELOS

Computer simulation of soil-water dynamics: a compendium of recent work

Daniel Hillel
Ottawa, 1977 IDRC-082e 215p. (casebound)
ISBN: 0-88936-119-3 $10.00

Describes the formulation of a number of models simulating soil physical processes and illustrates the results obtainable from them. Addressed mainly to problem-oriented research workers concerned with agricultural and environmental aspects of the soil system. Physically based mathematical-simulation techniques allow researchers to presearch the possible effects of controllable variables on the soil-water-plant system before embarking on a full-scale research program.

VECTOR CONTROL
LUTTE CONTRE LES VECTEURS
CONTROL DE VECTORES

Tsetse control: the role of pathogens, parasites, and predators (Report of a scientific advisory group convened at the Memorial University of Newfoundland, St. John's, Canada, 25-29 March 1974)

IDRC
Ottawa, 1974 IDRC-034e 23p.
ISBN: 0-88936-039-1 $2.00

Includes discussion of the current status of tsetse control; tsetse ecology, physiology, and behaviour; biological control agents — parasites, pathogens, and predators — and techniques for their mass production; and research and training needs.

La lutte contre les tsé-tsé: le rôle des pathogènes, parasites et prédateurs (Rapport d'un groupe scientifique consultatif réuni à l'université Memorial de Terre-Neuve, St. Jean, Canada, du 25-29 mars 1974)

CRDI
Ottawa, 1974 IDRC-034f 24p.
ISBN: 0-88936-046-4 $2.00

Traite de la lutte menée actuellement contre la tsé-tsé, de son écologie, de sa physiologie, et de son comportement. Recommande l'orientation des recherches vers l'utilisation d'agents biologiques — parasites, pathogènes et prédateurs — et leur production massive.

Tsetse: the future for biological methods in integrated control

Marshall Laird, editor
Ottawa, 1977 IDRC-077e 220p.
ISBN: 0-88936-109-6 $8.75

Describes tsetse fly control in Africa south of the Sahara. Discusses the systematics of the genus *Glossina* and the use of biological methods and insecticides in integrated approaches to trypanosomiasis vector control.

WATER SUPPLY AND SANITATION
ALIMENTATION EN EAU, HYGIÈNE ET ACTION SANITAIRE
SUMINISTRO DE AGUA Y SANAEMIENTO

Rural water supply and sanitation in less-developed countries: a selected annotated bibliography

Anne U. White and Chris Seviour
Ottawa, 1974 IDRC-028e 82p.
ISBN: 0-88936-033-2 $5.00

Contains 242 fully annotated citations of journal articles dealing primarily with the improvement of water supply and sanitation conditions through the application of research in science and technology. Includes author and subject indexes.

Hidden waters in arid lands: report of a workshop on groundwater research needs in arid and semi-arid zones, held in Paris, France, 25 November 1974

L. A. Heindl, editor
Ottawa, 1975 IDRC-057e 18p.
ISBN: 0-88936-073-1 $1.50

Analyzes the availability of groundwater in arid and semi-arid zones, groundwater sources and quality, the environmental and cultural impact of groundwater development, and means for predicting and coping with drought. Three working documents are included on microfiche.

Low-cost options for sanitation

Witold Rybczynski, Chongrak Polprasert, and Michael McGarry
Ottawa, 1978 IDRC-102e (in press)
ISBN: 0-88936-155-X $4.00

An annotated bibliography and technical review of

sanitary systems in developing countries. Also included are a keyword index, author index, author's corporate affiliation index, a glossary of terms used, and illustrations.

Biogas technology in the Third World: a multidisciplinary review

Andrew Barnett, Leo Pyle, and S. K. Subramanian
Ottawa, 1978 IDRC-103e (in press)
ISBN: 0-88936-162-2 $7.50

Describes biogas generation in developing countries and the technical aspects of biomass and organic waste fermentation. Discusses other energy sources available to communities; feasibility of small-scale digestors for the production of fuel and fertilizer; and social implications and economic aspects of biogas technology. Includes case studies from Asia.

Compost, fertilizer, and biogas production from human and farm wastes in the People's Republic of China

Michael G. McGarry and Jill Stainforth, editors
Ottawa, 1978 IDRC-TS8e 94p.
ISBN: 0-88936-140-1 $5.00

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