INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

the first 200 projects

June 1974
IDRC Regional Offices:

Africa and the Middle East
CRDI
B.P. 1107
Dakar CD Annexe
Sénégal

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

Latin America and the Caribbean
CIID
Apartado Aéreo 53016
Bogotá, D.E.
Colombia
the first
200
projects

EDITOR: Claire Veinotte

June 1974

Office of Public Information
International Development Research Centre
P.O. Box 8500
Ottawa, Canada K1G 3H9
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INTRODUCTION

The International Development Research Centre was established in 1970 by Act of the Canadian Parliament "to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions." It has, for the most part, concentrated its efforts on trying to improve the wellbeing of rural peoples. Projects of research are being, or have been, carried out in some 75 countries. This means that there is a wide spread of projects throughout the developing regions. But agricultural projects, in particular, have been concentrated in the poorest of regions, the semi-arid tropics.

While funded by appropriations voted by the Parliament of Canada, the Centre is governed by an international Board of Governors from 10 countries besides Canada, six of whom are from developing countries. The Governors meet twice yearly, and the Board's Executive Committee meets four times a year. The Governors set the priorities for the Centre and approve all major projects.

During the 3½ years from the inaugural Board meeting in October 1970 to the meeting held in Dakar in March 1974, 200 projects were approved which called for appropriations of $28.9 million. As will be seen in the following pages, the great majority of the grants have been made to institutions in developing countries, to enable them to do their own research. This is in line with the emphasis placed by the Governors and Officers of the Centre on the second objective laid down under the enabling Act: "to assist the developing regions to build up the research capabilities, the innovative skills and the institutions required to solve their problems."

In other publications the projects are listed under the four administrative divisions of the Centre which helped the institution define and elaborate the project proposal. These divisions are: Agriculture, Food and Nutrition Sciences (AFNS); Information Sciences (IS); Population and Health Sciences (PHS); Social Sciences and Human Resources (SSHR). In this booklet, however, the projects are listed instead by geographical area and by subject (in the index).
with the initials of the division indicated after each project. For the booklet is designed to give an answer to people who ask such questions as "What's the Centre doing about technology policies?" or "What projects is the Centre supporting in Nigeria?"

The dollar figure following the project description is the amount of the Centre's grant contribution to the project. This is not the full amount of funds available to these projects, however. In several cases there have been other donor institutions, with whom the Centre has joined in a partnership venture. In nearly every case there has been a substantial contribution also from the recipient government or institution in the developing country, either in funds or salaries or facilities. This is obviously an important element in any project. However, for reasons of space and clarity, these other contributions have not been listed individually. Nevertheless, the following estimate should give an idea of the importance of these contributions: the total value of all contributions from recipient institutions in these 200 projects is the equivalent of between $12 and $13 million.

The date next to the dollar figure refers to the month and year in which the Centre's funds were committed; that is, the month when the agreement for the project was signed by all parties. This is a stage later than approval by the Board of Governors. When a date is missing, the reason is that, although the project is approved, the agreement was not yet signed by all parties at the time of going to print.

The figure in years is the planned duration of the project.

News releases have been published on many of these projects, describing their background more fully than in the brief description offered here. Anyone who wishes further information on a particular project is therefore invited to get in touch with the Office of Public Information at the Centre, and ask for one of these releases.

Clyde Sanger

June 1974
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AFNS: Agriculture, Food & Nutrition Sciences  
IS: Information Sciences  
PHS: Population & Health Sciences  
SSHR: Social Sciences & Human Resources
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AFRICA
Regional Projects

1. Impediments to Vital Statistics (OCAM)
   For the Organisation Commune Africaine Malgache et Mauricienne (OCAM),
   Cameroon, to identify all obstacles presently hindering the efficiency
   of the vital statistics services in 13 African countries, and thus formulate
   policies leading to the improvements sought by the governments concern-
   ed. (Countries studied: Madagascar, Mauritius, Rwanda, Gabon,
   Cameroon, Central African Republic, Chad, Niger, Dahomey, Togo, Ivory
   Coast, Upper Volta, Senegal).
   (PHS) March 1974, 6 months $9,800.

2. CODESRIA-Social Science Networks (Africa)
   For the Council for the Development of Economic and Social Research
   in Africa (CODESRIA), Dakar, Senegal, to establish a permanent secretariat
   to coordinate and stimulate social science research and contact among
   African institutions and social scientists.
   (SSHR) 3 years $102,500.

3. Animal Production (ILCA)
   To enable the IDRC to act as executing agent in the final stages of defi-
   nition and establishment of the International Livestock Centre for Africa
   (ILCA), to be located in Addis Ababa, Ethiopia.
   (AFNS) September 1973, 2 years $150,000.

4. Cartographic Inventory (Africa)
   For the UN Economic Commission for Africa, Addis Ababa, Ethiopia, to do a
   country-by-country inventory and analysis of existing cartographic work
   in North, Central, East and West Africa, and publish the results in a series
   of indexed maps.
   (IS) May 1974, 3 years $449,705.

See also projects 27 and 69.

ALGERIA

5. Triticale, Grain Legumes (Algeria)
   For the Ministry of Agriculture and Agrarian Reform of the Government of
   Algeria, to carry out research aimed at producing high-yield varieties of
   grain for animal feed and human consumption, improve legume production and
   provide training to Algerians in this field.
   (AFNS) 2 years $182,800.
CAMEROON

6. Rural Educational Program (Cameroon)

For the Pan-African Institute for Development, Geneva, to support eight pilot schemes in Cameroon linking education programs with production opportunities, and to provide more practically oriented course material for rural primary schools.

(SSHR) October 1973, 3 years $479,000.

See also projects 1 and 7.

CENTRAL AFRICAN REPUBLIC

7. Population Dynamics Survey (Central Africa)

For the Union Douanière et Economique de l'Afrique Centrale (UDEAC) in the Central African Republic, to support final studies in a longitudinal survey on rural population dynamics in that country, Gabon, Cameroon and Congo-Brazzavile, and a joint seminar to study policy recommendations.


See also project 1.

CHAD

See project 1.

CONGO-BRAZZAVILLE

See project 7.

DAHOMEY

See project 1.

EAST AFRICAN COMMUNITY

8. Sorghum Improvement (East Africa)

For the East African Community, for a breeding program in Serere, Uganda, aimed at growing sorghum varieties more resistant to birds and insects, and testing them at trial stations throughout East Africa.

(AFNS) September 1972, 3 years $76,000.
9. Trypanosomiasis (East Africa)
   For the East African Community, to develop effective measures for the control of two lethal diseases of cattle in Africa, Animal Trypanosomiasis and East Coast Fever, through specific studies at Muguga, Kenya, of the development of anaemias and lesions in infected cattle.
   (AFNS) May 1974, 2½ years $399,200.

EGYPT

10. Copper T Trial (Egypt)
    For the Supreme Council of Family Planning of the Government of Egypt, to enable Cairo University to carry out clinical trials of the Copper T contraceptive device.
    (PHS) November 1971, completed $7,717.

11. Copper T Trial (Egypt), Phase II
    For the Supreme Council of Family Planning, to continue clinical trials of the intra-uterine device among 250 Egyptian women, and to study causes and effects of its high retention rate.
    (PHS) November 1973, 1 year $14,440.

12. Epidemiological Study of Rural Induced Abortion (Egypt)
    For the Supreme Council of Family Planning, to carry out an epidemiological study of induced abortions in a rural area near Cairo, to assess the size of the problem and the health hazards.
    (PHS) November 1971, completed $13,316.

13. Epidemiological Study of Rural Induced Abortion, Supplemental
    For the Supreme Council of Family Planning, to analyze and process data collected during the initial phase of the project.
    (PHS) December 1973, 1 year $5,000.

See also projects 69 and 154.

ETHIOPIA

14. Triticale Outreach (Ethiopia)
    For the Institute of Agricultural Research in Addis Ababa, to test the adaptability of improved types of triticale, developed in Mexico, under Ethiopia's environmental conditions, and its acceptance as a cereal mixed with villagers' traditional dishes.
    (AFNS) August 1972, 4 years $82,290.
15. Sorghum Improvement (Ethiopia)
For Haile Selassie I University, Addis Ababa, to assist its Faculty of Agriculture in research aimed at improving varieties of sorghum suitable for high altitudes and low temperatures.
(AFNS) May 1973, 2 years $195,300.

See also projects 3, 4, 69 and 148.

GABON
See projects 1 and 7.

GHANA

16. Rural Fisheries (West Africa)
For the Government of Ghana and Ghanaian research agencies, to assist in a program designed to improve fishing techniques, preservation systems and marketing network of coastal villagers, with strong emphasis on training programs, as well as on improving the nutrition of consumers inland.
(AFNS) May 1972, 4 years $441,000.

17. Wood-Cement Products
For the Government of Ghana, to support its Forest Products Research Institute in experiments to develop mineral-bound organic particle boards from indigenous timber, and to test them for resistance to climate and insect damage.
(AFNS) January 1973, 2½ years $67,250.

18. Grain Storage (Ghana)
For the University of Science and Technology, Kumasi, to test four different types of storage bin for maize and cowpeas with a view to reducing spoilage of food crops in tropical countries.
(AFNS) May 1974, 2 years $19,700.

IVORY COAST
See projects 1 and 43.
KENYA

19. Growth Centres and Rural Development (Kenya)
For the departments of Geography of the University of Nairobi and Carleton University, to study the Muranga district in Kenya with the aim of assessing how far the strategy of "growth centres" has assisted or can assist rural development.

(SSHR) February 1972, completed $127,150.

20. Growth Centres and Rural Development (Kenya), Supplemental
For the Department of Geography, Carleton University, to pay the costs of an additional visit to the project site, and to support four graduate students working on the project for an additional month.

(SSHR) August 1973, completed $3,000.

21. Animal Diseases (ILRAD)
For the International Laboratory for Research on Animal Diseases, Kabete, to develop means of immunological control of Trypanosomiasis and East Coast Fever, livestock scourges in several regions of Africa.

(AFNS) January 1974, 1 year $100,000.

See also projects 8 and 149.

MADAGASCAR

See project 1.

MALI

22. Irrigated Forest Plantations (Mali)
For the Ministry of Production of the Government of Mali, to select the most suitable forest species and to develop silviculture techniques for existing irrigated lands not suitable for agriculture.

(AFNS) 5 years $190,900.

23. Pilot Family Planning Program (Mali)
For the Government of Mali to support a two-year pilot scheme in Bamako, including establishment of clinics, training of personnel and a national statistical survey.

(PHS) October 1971, 2½ years $252,290.
24. Pilot Family Planning Program (Mali), Supplemental
For the Government of Mali, to enable its Ministry of Public Health to expand the clinical aspect of the program by providing continuing salary support for the resident research advisor, medical and other staff, and helping defray other expenditures.

(PHS) April 1974, 6 months $30,000.

25. Savanna Timbers (Mali)
For the Ministry of Production of the Government of Mali, for laboratory tests and field trials designed to improve ways of processing the timber of a dozen species of trees grown in the savanna regions.

(AFNS) January 1973, 3 years $108,000.

MAURITIUS

26. Library Training Experiment (Mauritius)
For the University of Mauritius, Reduit, to organize a course of fifteen months’ duration as an experiment in shorter and less costly training of library personnel which could eventually alleviate the serious shortage of librarians in Africa and other developing countries.

(IS) 2 years $94,700.

See also project 1.

MOROCCO

27. Training Policy (Africa)
For the African Training and Research Centre in Administration for Development (CAFRAD), Tangier, to organize country case studies and develop position papers to be discussed at a conference on African training executives in the field of management.

(SSHR) February 1974, 10 months $44,000.

NIGER

28. Village Woodlots (Niger)
For the Forestry Services of the Ministry of Rural Economy, Government of Niger, to establish woodlots near 70 villages as an experiment in reforestation which could eventually alleviate the shortage of firewood in the semi-arid zone of West Africa.

(AFNS) January 1974, 5 years $141,200.

See also project 1.
NIGERIA

29. Gari Processing Technologies (Nigeria)
For the University of Ife, to support a study of the supply and demand, and of the processing and distribution structure, for gari (a staple West African food made from cassava) in order to advise planners on appropriate forms of processing equipment.

(SSHR) December 1972, 1 year $19,351.

30. Grain Milling and Utilization (West Africa)
For the Government of Nigeria, to set up and test-operate at Maiduguri an improved milling system developed in Canada with 5 to 10 times the grinding capacity of present mills, and to improve storage, packaging and marketing methods throughout a large rural area of North-East Nigeria.

(AFNS) May 1972, 2 years $132,250.

31. Institutional Modernization (Nigeria)
For the University of Nigeria at Nsukka, to assess the effectiveness of recent changes in local government structure in East-Central and South-Eastern states, and to suggest further means of involving traditional institutions in the process of rural modernization.

(SSHR) November 1973, 2 years $116,800.

32. Public Libraries (Nigeria)
For the National Library of Nigeria, to carry out a survey throughout Lagos to evaluate the adequacy and effectiveness of all library services, and also a sociological study linked with census data to uncover the library needs of a wider reading public.

(IS) November 1973, 18 months $43,000.

See also projects 107, 151, 152, 154, 160 and 191.

RWANDA

See project 1.

SENEGAL

33. Sorghum Breeding, Intercropping and Grain Preservation (Senegal)
For the Government of Senegal, to enable the Centre National de Recherches Agronomiques, Bambey, to launch a program to introduce improved sorghum varieties in mixed systems with millet, cowpeas and groundnuts within village communities.

(AFNS) October 1972, 4 years $797,600.
34. Gum Arabic (Senegal)
   For the Ministry of Rural Development of the Government of Senegal, for research into ways to help improve the methods of production and the quality of gum arabic from certain species of Acacia tree.
   (AFNS) January 1973, 4 years $202,600.

35. The West African International Atlas
   For the Institut Fondamental d'Afrique Noire, Dakar, to assist in the preparation of three thematic maps for the third volume of the Atlas.
   (IS) April 1973, 1 year $5,775.

36. Household Budget Survey (Senegal)
   For the Ministry of Finance and Economic Affairs of the Government of Senegal, to help carry out among Senegalese households a demonstration survey to examine the relationship of economic, social and demographic factors.
   (PHS) September 1973, 20 months $150,400.

37. Land Tenure (Senegal)
   For the Institute for Tropical Crops Research (IRAT), Bambey, to gather more precise data on the present systems of land tenure and thus determine the relationship between traditional systems and more recent systems influenced by legislation in this field.
   (SSHR) January 1974, 2 years $114,150.

38. Rangeland Reforestation (Senegal)
   For the Forestry Services of the Government of Senegal, to select the most drought resistant species to be used in the reforestation of the arid regions of the country.
   (AFNS) 4 years $173,800.

See also projects 1 and 2.

SIERRA LEONE

39. Oysterculture (Sierra Leone)
   For the Ministry of Agriculture and Natural Resources of the Government of Sierra Leone, for research on the mangrove oyster in tidal swamplands with a view to establishing an organized and profitable industry for coastal villages.
   (AFNS) February 1974, 3½ years $164,500.
SUDAN

See Project 69.

TANZANIA

40. Intercropping (Tanzania)
   For the University of Dar-es-Salaam, to test which varieties of sorghum
   and millet are best suited for crop mixtures, and to test varieties of
   cowpeas for resistance to pests and diseases.
   (AFNS) September 1972, 3 years $120,570.

41. Fertility Levels and Differentials (Tanzania)
   For the University of Dar-es-Salaam, to carry out jointly with the Govern-
   ment's Central Statistics Bureau a fertility survey in different regions
   of Tanzania, and to provide data comparative to those of the Zaire surveys.
   (PHS) June 1973, 18 months $74,000.

See also project 8.

TOGO

See projects 1 and 149.

UGANDA

42. Sorghum, Finger Millet and Pigeon Pea (Uganda)
   For Makerere University in Kampala, to support a three-year program of
   research on these three crops, including physiology studies and plant
   breeding.
   (AFNS) August 1972, 3 years $195,050.

See also project 8.

UPPER VOLTA

43. Vector Control Onchocerciasis (West Africa)
   For the Organisation de Coordination et de Coopération pour la Lutte contre
   les Grandes Endémies (OCCGE) in Upper Volta, and Memorial University of
   Newfoundland, for a collaborative research program designed to control
   biologically the blackfly vector of onchocerciasis (African river blindness)
   through a parasitic worm. Research is also taking place in Ivory Coast.
   (PHS) September 1972, 3 years $239,740.
44. Migration Volume and Determinants (Upper Volta)
For the Government of Upper Volta's Social Sciences Research Centre and the Department of Statistics, to compile comprehensive data on the volume and determinants of migration in Upper Volta.

(PHS) February 1974, 2 years, 9 months $274,199.

See also project 1.

ZAIRE

45. Regional Demographic Surveys (Zaire)
For the National Institute of Statistics of the Government of Zaire, to carry out a demographic survey in three major cities, to measure fertility, migration and socio-economic variables, and to devise surveying techniques that may be applied in other African countries.

(PHS) August 1972, 18 months $99,500.

46. Cassava Toxicity (Zaire)
For the Institut de Recherche Scientifique en Afrique Centrale (IRSAC), near Bukavu, and the University of Brussels, to determine the role of cassava and the mechanism of its action in the etiology of endemic goitre and cretinism in the Uele and Ubangi regions of Zaire.

(PHS) April 1974, 3 years $279,575.

ASIA

Regional Projects

47. Impact of Rice Farming Changes (Asia)
For the International Rice Research Institute and institutes in participating countries to provide information on the changes taking place in farms as a result of the new rice technology in 13 areas in India, Indonesia, Malaysia, Pakistan, the Philippines and Thailand.

(SSHR) February 1972, 18 months $57,298.

48. Soil Engineering Information Centre (Asia)
For the Asian Institute of Technology (AIT), Bangkok, Thailand, to enable the Institute to establish a centre that will gather information on geotechnical engineering research and projects in Asia, and will provide a publications service.

(IS) October 1972, 3 years $53,630.
49. Industrial Extension Service (Southeast Asia and Canada)
To establish in the IDRC Singapore office a range of services that can support the national services of industrial extension already working in Southeast Asia, and to strengthen the back-up capacity of technical information services of the National Research Council in Canada to respond to queries from developing countries.

(IS) September 1972, 5 years $1,180,000.

50. Regional Research and Training Program (South and Southeast Asia)
For the Agricultural Development Council, New York, to pursue efforts to indigenize research, enhance research capabilities, advance interchange among scientists across national borders and provide the opportunity and framework for research on common problems on a regional basis.

(SSHR) November 1971, completed $120,000.

51. Regional Research and Training Program (South and Southeast Asia)
For the Agricultural Development Council, New York, to continue a program of seminars, training grants, research grants and exchange of scholars designed to enable Asian scientists from different countries to meet and build a regional framework for research on common problems.

January 1973, 1 year $165,000.

January 1974, 2 years $547,250.

52. Population Research Support Program (Southeast Asia)
To enable the IDRC together with the Ford Foundation to develop a program of one-year research awards for young Asian scientists to carry out studies on population questions.

December 1973, 2 years $129,880.

53. Delivery System for Mass Primary Education
For the Regional Center for Educational Innovation and Technology (INNOTECH), Saigon, of the Southeast Asian Ministers of Education Organization (SEAMEO), to carry out research on a delivery system for education at 2 field projects in Indonesia and the Philippines, and to develop the most cost-effective means for teaching the national language in the early grades.

February 1974, 3 years $360,000.

54. Low-Cost Housing (Southeast Asia)
For eight different institutions, one each in Hongkong, Indonesia, Laos, Malaysia, Philippines, Singapore, Sri Lanka and Thailand, to study the experiences in low-cost housing in Hongkong and Singapore and adapt their findings in formulating appropriate policies in this area for their own countries.

April 1973, 18 months $161,000.

55. Implementation of Development Programs (EROPA)
For the Eastern Regional Organization for Public Administration in Manila, to help carry out five case-studies of how various development projects have been implemented in India, Iran, Korea, Nepal and Sri Lanka.

August 1972, 18 months $19,650.
56. Asian Association of Development Research and Training Institutes
For the Asian Association of Development Research and Training Institutes, Bangkok, Thailand, to establish a permanent secretariat and support activities vital to the coordination and effective management of the association.
(SSH) 27 months $168,000.

57. Asian Packaging Information Centre (APIC)
For the World Packaging Organization, Hongkong, for the establishment of a Centre to be operated by the Hongkong Packaging Council, to collect and disseminate information for the better packaging of agricultural produce and manufactured products in Asia.
(IS) May 1974, 2 years $49,720.

HONGKONG
See projects 54 and 57.

INDIA
58. Grain Legumes (ICRISAT)
To the International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, to develop varieties of pigeon pea that are early maturing and better adapted to the semi-arid tropics, and to develop varieties of chick-pea that are high-yielding and more resistant to wilt and blight.
(AFNS) July 1973, 2 years $496,000.

59. Cropping Systems (ICRISAT)
For the International Crops Research Institute for the Semi-Arid Tropics in Hyderabad, to maintain its sorghum program for one year.
(AFNS) October 1972, completed $100,000.

See also projects 47, 55 and 153.

INDONESIA
60. Hawkers and Vendors (Southeast Asia)
For the Bandung Institute of Technology, Indonesia, the Australian National University, the Malaysian Institute of Planners, and the University of the Philippines, to study the role of hawkers and vendors in the marketing and distribution of agricultural products in six cities of Malaysia, Indonesia and the Philippines, and to recommend policies to improve their role in the community.
(SSH) February 1973, 1 year $63,000.
61. Cooperative Regional Development (Southeast Asia)
   For the Institute of Economic and Social Research in Indonesia, Thai University Research Associates and the University of the Philippines, to study ways to incorporate a regional balance between urban and rural areas, the metropolis and smaller cities, into these three countries' plans for social and economic development.
   (SSHR) February 1973, 2 years $349,940.

62. Technical and Social Progress (Malaysia and Indonesia)
   For the Universiti Sains Malaysia, Universitas Sjiah Kuala and Laval University, to carry out field studies in 32 villages in West Malaysia and northern Sumatra on the spread of technical innovations in agriculture and whether technical progress is accompanied by improvement in the lives of rural people.
   (SSHR) January 1973, 2 years $77,636.

63. Cassava (Indonesia)
   For the Faculty of Agriculture, University of Brawijaya, Malang, to explore ways of increasing cassava yields, particularly by combining the photosynthetic capabilities of perennial tree cassava with the standard root-producing plant.
   (AFNS) November 1973, 3 years $90,000.

64. Indonesian Demography Journal
   For the University of Indonesia, to create a journal on demography which will expand population studies and provide an information link among the many universities in Indonesia.
   (PHS) January 1974, 2 years $15,000.

See also projects 47, 53, 54, 151 and 152.

IRAN

65. Village Health Workers (Iran)
   For Pahlavi University, Shiraz, to enable its Department of Community Medicine to carry out a pilot project of training local villagers to deliver simple but rapid medical care and to teach preventive hygiene.
   (PHS) January 1973, 3 years $147,600.

See also projects 55 and 149.

ISRAEL

66. Irrigation Information Centre (Israel)
   To provide funds for the pilot operation of an information centre on irrigation science and technology.
   (IS) 2 years $212,900.
KOREA

67. Value of Children to Parents (Asia)
For the Korean Institute for Research in the Behavioural Sciences, South Korea; the University of the Philippines; and Chulalongkorn University, Thailand; for a collaborative survey on the satisfactions and costs of children, and the motivations for child-bearing in these countries.
(PHS) September 1972, 2 years $69,786.

68. Value of Children to Parents (Asia), Phase II
For the Korean Institute for Research in the Behavioural Sciences; the University of the Philippines; and Chulalongkorn University, Thailand; to complete the analysis of the first phase of the project and with the addition of Bogazici University, Turkey, to lay the groundwork for a larger study.
(PHS) 1 year $68,517.

See also projects 55, 151, 152 and 153.

LAOS

See project 54.

LEBANON

69. Sorghum, Millet, Legumes (ALAD)
For the Arid Lands Agricultural Development Program (ALAD), Beirut, to conduct research on the improvement and adaptation of sorghum, millet and food legumes to North African and Middle-East countries with a strong emphasis on developing national research programs throughout the region.
(AFNS) October 1973, 2 years $680,000.

70. Food from Grains (Lebanon)
For the American University of Beirut, to develop, adapt and demonstrate improved technologies for better utilization of cereals and grain legumes throughout the Near East, and to study the influence of soil and environment on the properties of certain important food grain legumes.
(AFNS) February 1974, 3 years $127,200.

See also project 148.
MALAYSIA

71. Maternal Health and Early Pregnancy Wastage (West Malaysia)
For the Federation of Family Planning Associations of Malaysia, to study the incidence, morbidity and mortality associated with an increase in induced early termination of pregnancy among Malaysian women.
(PHS) January 1973, 2½ years $92,090.

72. Maternal Health and Early Pregnancy Wastage (West Malaysia), Supplemental
For the Federation of Family Planning Associations of Malaysia, to meet the cost differences of pregnancy diagnostic kits, the extension of consultancy visits, an increase in personnel salary, and the rental of additional office space.
(PHS) April 1974, 2½ years $20,000.

73. Microbiological Enrichment (Malaysia)
For the University of Malaya, to develop a simple technology to increase the protein content of cassava feed and to test the nutritional and biological value of the feed produced.
(AFNS) August 1973, 3½ years $86,700.

74. Carps (Malaysia)
For the Malaysian Agricultural Research and Development Institute, Kuala Lumpur, to develop means to increase fish seed supply, and to train personnel in fish reproduction, nutrition and hatchery techniques.
(AFNS) 3 years $280,000.

See also projects 47, 54, 60, 62, 151 and 152.

NEPAL

75. Regional Development (Nepal)
For the Centre for Economic Development and Administration in Kathmandu, in conjunction with project 61, to gather an inventory of resources in the Kosi and Far Western growth sectors of Nepal, and to prepare an operational plan for the development of these regions to form a basis for part of the Fifth Plan (1975-80).
(SSHR) June 1973, 20 months $260,000.

76. Health Manpower Development (Nepal)
For Tribhuvan University in Kathmandu, to support its Institute of Medicine in a study of rural health needs, the future demand for different levels of health manpower, and the most appropriate training curriculum.
(PHS) May 1973, 2 years $217,022.
77. Economic and Management Study (Nepal)
For Management Consultants and Co. in Kathmandu working with the Economic Analysis Unit of the Finance Ministry, to evaluate the performance of government-owned corporations as a management instrument in the development of Nepal.
(SSHR) March 1973, 7 months $5,840.

See also project 55.

PAKISTAN

See project 47.

PHILIPPINES

78. Multiple Cropping (Philippines)
For the International Rice Research Institute and the University of the Philippines, to support their work in encouraging rice-farmers in the Philippines also to grow crops such as soybeans and sorghum, and apply elsewhere the results of this pilot scheme.
(AFNS) February 1972, 2 years $230,800.

79. Multiple Cropping (Philippines), Phase II
For the International Rice Research Institute and the University of the Philippines, to expand their research into the agronomy, economics and entomology of intercropping in the Philippines and to encourage the development of a cooperative network of intercropping projects in Southeast Asia.
(AFNS) November 1973, 2 years $442,950.

80. Rural Credit Associations (Philippines)
For the University of the Philippines, Los Baños, to study and evaluate the rural credit program in the Philippines by gathering data and conducting a nationwide survey, with a view to improving its effectiveness and efficiency.
(SSHR) May 1974, 3 years $300,000.

81. Agricultural Information Bank for Asia
For the Southeast Asian Regional Centre for Graduate Study and Research in Agriculture (SEARCA), Los Baños, to develop a comprehensive computer-based system on agricultural information with a view to ultimate linkage with AGRIS, and to provide training for key SEARCA personnel.
(IS) February 1974, 1 year $70,250.

See also projects 47, 53, 54, 60, 61, 67, 68, 149, 151 and 152.
SINGAPORE

82. Evolution of Technological Institutions (Singapore)
For the Science Council of Singapore, to undertake a study of the technical institutions established in Singapore since 1959, tracing their historical growth and their contributions to investment promotion and national economic development.
(IS) September 1973, 3 years $19,800.

83. Socio-Psychological Effects of Abortion (Singapore)
For the University of Singapore, to assess the effect of abortions on the mother and family unit with a view to motivating people to use contraceptive methods in lieu of abortion.
(PHS) May 1974, 2 years $66,978.

See also projects 49 and 54.

SRI LANKA

84. Rural Modernization (Sri Lanka)
For the Marga Institute, to support early stages of a 10-year study of how rural communities in five differing areas react to new technologies such as smallscale farm mechanization, and what demographic changes occur through migration and other factors.
(SSHR) November 1973, 3 years $75,000.

See also projects 54, 55 and 149.

THAILAND

85. Technological Change in Thai Industry
For the Applied Scientific Research Corporation of Thailand, to carry out research related to the economic and social needs of Thailand; and to investigate three sets of relationships: between science/technology and the modern industrial sector; between science/technology and the traditional industrial sector; and between the modern and traditional industrial sector.
(SSHR) September 1971, completed $28,751.

86. Technological Change in Thai Industry, Phase II
For the Applied Scientific Research Corporation of Thailand, to extend by several months field studies of technical change in small and medium-sized firms in the rubber processing, sericulture and tapioca processing industries, and to finance a Thai researcher completing postgraduate work in science and technology policies.
(SSHR) June 1973, 2 years $18,600.
87. Multiple Cropping (Thailand)
For Kasetsart University in Bangkok, to enable its Faculty of Agriculture
to carry out research aimed at increasing the range of crops grown in the
Central Plain of Thailand, and to develop improved recipes in cooperation
with the village women.
(AFNS) May 1973, 3 years $208,300.

88. Traditional Midwives in Family Planning (Thailand)
For Mahidol University in Bangkok, to enable its Department of Maternal
and Child Health to test alternative methods of training granny midwives
so that they may play a part in Thailand's national family planning program.
(PHS) October 1972, 2 years $30,500.

89. Traditional Midwives in Family Planning (Thailand), Supplemental
For Mahidol University, Bangkok, to enable its Department of Maternal and
Child Health to produce a film for the orientation of health personnel,
the training of midwives and demonstration of their role to villagers.
(PHS) May 1974, 1 year $9,200.

See also projects 47, 48, 54, 56, 61, 67, 68, 148 and 191.

TURKEY

90. Population Growth and Economic Development (Turkey)
For the Development Foundation of Turkey, to study the implications of
existing and projected population growth as it affects the needs for addi-
tional housing, health care facilities, employment and educational oppor-
tunities, and economic development in general.
(PHS) April 1974, 2 years $49,603.

See also projects 68, 69, 151 and 152.

LATIN AMERICA and the CARIBBEAN
Regional Projects

Many IDRC-supported projects in Latin America and the Caribbean involve cooperation
between institutions in four or more countries, without necessarily embracing the
entire region. They have been listed under one country, with cross references from
the other countries involved. But for convenience these projects are also listed
ARGENTINA

91. Alternative to Club of Rome World 3 Model
For the Fundación Bariloche in Buenos Aires, to help a team of Latin American scientists design an alternative mathematical model that will forecast the condition of the world and its development over several generations, and will view these questions from the standpoint of Third World countries.
(SSH) July 1972, 1 year $81,000.

92. Alternative to Club of Rome World 3 Model, Supplemental
For the Fundación Bariloche, for completion of the above project.
(SSH) November 1973, 10 months $31,500.

See also projects 130 and 154.

BARBADOS

93. Fertility Declines (Barbados)
For the University of Western Ontario, to determine the key variables, including the practice of family planning, that have resulted in a significant fertility decline in that country.
(PHS) March 1971, 2½ years $69,790.

94. Fertility Declines (Barbados), Supplemental
To allow two West Indian students to undertake the second year of a Master's program in Sociology at the University of Western Ontario, majoring in Demography, as part of the project studying the causes of fertility decline in Barbados funded in 1970-71.
(PHS) October 1973, 1 year $10,810.

95. Fertility Declines (Barbados), Supplemental
For the Department of Sociology of the University of Western Ontario, to enable the university to complete its analysis of data collected during the initial study.
(PHS) July 1973, 10 months $6,500.

96. Research Priorities in the Caribbean
For the University of the West Indies, to study economic potential of alternative crops and livestock enterprises in Barbados, as a model for agricultural development in the Caribbean.
(AFNS) July 1971, 2½ years $88,774.

See also projects 122 and 123.
BOLIVIA

See projects 107, 132 and 133.

BRAZIL

97. Industrial Extension Service (Brazil)
To help finance the training of two Brazilian engineers in industrial extension service at the Technical Information Service of the National Research Council of Canada.
(IS) August 1972, completed $7,500.

98. Development of Regional Typology (Brazil)
For the Centro Brasileiro de Analise e Planejamento (CEBRAP) in Sao Paulo, to elaborate a typology of Brazil's different regions with regard to economic, social, demographic and other factors, as a basis for further demographic and social research.
(PHS & SSHR) August 1972, 9 months $17,300.

99. Changing Fertility Patterns (Brazil)
For the Centro Brasileiro de Analise e Planejamento (CEBRAP) in Sao Paulo, to carry out a survey of sociological and psychological factors affecting fertility behaviour in 12 areas of Brazil.
(PHS) August 1973, 3 years $178,100.

100. Cassava Brazil (CIAT)
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia, to provide a broad range of research workers from North-East Brazil with intensive training in cassava research techniques at CIAT and to demonstrate the results of CIAT's current research program.
(AFNS) 1 month $28,000.

See also projects 130, 153 and 191.

CHILE

101. Rural Fertility Surveys (Latin America)
For the Centro Latinoamericano de Demograffa (CELADE), Santiago, for comparative analysis, by ten research fellows in training seminars, of fertility data gathered from Costa Rica, Mexico, Colombia and Peru.
(PHS) December 1971, 3 years $149,300.
102. Rural Fertility Surveys (Latin America), Supplemental
For the Centro Latinoamericano de Demografia (CELADE), Santiago, to add three research fellows to the seminars, and provide additional salary support for one year to a member of CELADE to assure continued efficient organization of the seminars.

(PHS) May 1974, 1 year $31,955.

103. Triticale (Chile)
For the Catholic University of Chile, Santiago, to select and identify triticale best suited to the environment and develop improved agronomic and crop management practices for triticale.

(AFNS) 3 years $91,000.

104. Population and Development Policies (Latin America)
For the Centro Latinoamericano de Demografia (CELADE), Santiago, to study the development plans and strategies of Brazil, Costa Rica, Cuba and Chile, determine their demographic impact and compare the existing differences by means of policy variables.

(PHS) 2 years $137,000.

See also projects 130, 132, 133 and 149.

COLOMBIA

105. Cassava/Swine Research (CIAT)
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, in cooperation with several Canadian universities, to improve the yields, characteristics, preservation and utilization of cassava as food for humans and feed for animals.

Funds supplied from CIDA's budget: $2,500,000.

(AFNS) September 1971, 5 years

106. CIAT Outreach Program
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, to support the major cassava/swine program by sponsoring a review conference, by trainee scholarships and other means.

(AFNS) October 1971, completed $82,000.

107. CIAT Swine Outreach
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, to develop a network of training centres on improved techniques of swine production and research, and to support specifically the programs in Nigeria, Costa Rica and Bolivia.

(AFNS) December 1973, 3 years $195,000.
108. Rural Health Development Program (CIMDER: Colombia), Phase I
For the Fundación para la Educación Superior, Cali, to enable the Centro de Investigaciones Multidisciplinarias en Desarrollo Rural (CIMDER) to design, implement and evaluate a system for delivery of rural health services in the Norte del Cauca region and adapting it to other areas of Colombia and eventually to other countries in Latin America.

(PHS) May 1974, 5 years $711,385.

109. Cassava Information Centre
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, to help establish a documentation and information analysis centre on cassava, and to produce a fully annotated bibliography of all relevant literature.

(IS) February 1973, 2 years $57,500.

110. Rural Development (Colombia)
For the Instituto Colombiano Agropecuario (ICA), Bogota, to support a broad experiment with smallholders in an area of 410,000 acres of the Andean foothills and uplands near Caqueza, to bring about higher crop and animal yields, improve the marketing system, provide farmers with easier access to agricultural credit and fertilizers, and nurture local initiatives.

(AFNS) August 1971, completed $150,000.

111. Rural Development (Colombia), Supplemental
To add six components to project 110, including marketing and hydrological studies, support of post-graduate students, and home economic and livestock studies.

(AFNS) October 1972, 1 year $44,000.

112. Rural Development (Colombia), Phase II
To expand project 110/111 from the experimental work with smallholders in the Caqueza area, putting a greater concentration on training programs.

(AFNS) September 1973, 3 years $716,000.

113. Changing Fertility (Bogota)
For the Asociación Colombiana de Facultades de Medecina (ASCOFAME), Bogota, for a comparative analysis of surveys of fertility, contraceptive practices and family planning motivations, conducted in 1964 and 1969, and for training of ASCOFAME staff in data analysis.

(PHS) July 1971, completed $6,531.

114. Evaluation of Family Life Education (Colombia)
For the Asociación Colombiana para el Estudio Científico de la Población, Bogota, for an evaluation of the impact of eight seminars on family life education, for which the Association gathered leaders of women's groups from several Latin American countries.

(PHS) June 1972, completed $6,950.
115. Health Manpower Policy Conference (Latin America)
    For the Panamerican Federation of Faculties of Medicine (PAFAMS), Bogota, to prepare and finance a conference in August 1974 of planners, government officials and university personnel on innovative health policies.
    (PHS) October 1973, 1 year $92,300.

116. Health Manpower Policy Conference (Latin America), Supplemental
    For the Panamerican Federation of Faculties of Medicine (PAFAMS), Bogota, to cover the salary and travelling expenses of a physician as Conference Coordinator for the August 1974 conference.
    (PHS) 1 year $6,900.

See also projects 100, 101, 102, 130, 132, 133, 154, 188, 191 and 196.

COSTA RICA

117. Rural Population Migration (Central America)
    For the Confederación Universitaria Centroamericana, San José, to study in five Central American countries (Costa Rica, Guatemala, El Salvador, Honduras and Nicaragua), the nature and determinants of migration particularly in rural areas.
    (PHS) February 1974, 18 months $63,000.

See also projects 101, 102, 107 and 129.

CUBA

See project 104.

DOMINICA

118. Pre-operational Family Planning (Dominica)
    For the Government of Dominica, for a study of the need and desire for a family planning program and for a program outline, to be carried out through the University of the West Indies.
    (PHS) April 1972, completed $19,846.

ECUADOR

See projects 132 and 133.
EL SALVADOR

See project 117.

GRENADA

See project 125.

GUATEMALA

119. By-Product Utilization (Guatemala)

For the Pan-American Health Organization, to support the Institute of Nutrition of Central America and Panama (INCAP) in research aimed at eliminating toxicity in coffee pulp, so that the pulp can be safely used in animal feeds.

(AFNS) February 1973, 2 years $109,716.

See also project 117.

GUYANA

120. Fish Products (Guyana)

For the Government of Guyana, to develop means of processing and marketing various species of fish which are presently discarded during shrimp trawling operations in many parts of the Caribbean.

(AFNS) November 1973, 3½ years $204,710.

See also project 123.

HONDURAS

See project 117.

JAMAICA

121. The Use of Educational Technology

For the Association of Caribbean Universities and Research Institutes (UNICA) in Kingston, to support research in the use of educational technology among the 31 institutions that are UNICA members, and for experimental programming in development courses.

(SSHR) October 1972, 15 months $68,000.
122. Root Crops (Caribbean)
For the University of the West Indies, Kingston, to help its Department of Biological Sciences do breeding and other research to promote greater production and use of cassava, sweet potatoes and yams.
(AFNS) February 1972, 2½ years $161,430.

123. Grain Legumes (Caribbean)
For the University of the West Indies, Kingston, for research on pigeon pea and dry beans, for training scholarships and for coordination with other similar research in Uganda, India and countries in Latin America.
(AFNS) February 1972, 2½ years $186,425.

124. Family Planning and Population Bibliography (West Indies)
For the Department of Social and Preventive Medicine, University of the West Indies, Kingston, to compile an annotated bibliography of documents relating to family planning in the West Indies since 1950.
(IS) October 1973, 18 months $11,200.

125. Family Planning Program Evaluation (West Indies)
For the University of the West Indies, Kingston, to enable its Department of Social and Preventive Medicine to evaluate family planning programs in Grenada, St. Lucia and St. Vincent, and formulate new directions for these programs.
(PHS) February 1974, 18 months $77,020.

126. UNICA Universities Network (Caribbean)
For the Association of Caribbean Universities and Research Institutes (UNICA), Kingston, to improve the coordination of collaborative research and exchange of information, and permit the Secretary-General to maintain contact with member institutions.
(SSHR) April 1974, 3 years $74,500.

MEXICO

127. Triticale Research (CIMMYT)
For the Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), Mexico, to develop the new cereal grain triticale to the point at which it can be grown and utilized over a wide area of the less developed tropics.
Funds supplied from CIDA's budget: $2,500,000.
(AFNS) September 1971, 5 years

128. Sorghum (CIMMYT)
For the Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), to support its research on sorghums that are tolerant of low temperatures, and to extend its germ plasm bank until its eventual transfer to a liaison station in Africa, linked with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Hyderabad, India.
(AFNS) October 1972, 2 years $70,170.
129. Collaborative Research in Human Reproduction (Central America)
For the Instituto Nacional de la Nutrición in Mexico City, to help develop a network of six units in Mexico and Costa Rica which will collaborate among themselves and with the World Health Organization in a program of research in human reproduction, with emphasis on new methods of fertility regulation.

(PSH) February 1973, 3 years $287,100.

130. Population Policy Research (Latin America)
For El Colegio de Mexico in Mexico City, to support a program of regional research to help in the formulation of national population policies, being undertaken by a group of Latin American social science institutions in Argentina, Brazil, Chile, Colombia and Mexico.

(PSH) October 1972, 2 years $150,000.

131. Leaders and Population Policies (Mexico)
For the Instituto Mexicano de Estudios Sociales, to identify and study various groups of community leaders with regard to population issues, and devise appropriate means to enhance Mexico’s recently-adopted population policy.

(PSH) February 1974, 1 year $45,205.

See also projects 101, 102, 148 and 153.

NICARAGUA

See project 117.

PERU

132. Science and Technology Policy Studies
For the Commission of the Andean Common Market, to assist in the development of a regional strategy to be adopted by the member countries for technology imports and for the building up of a science and technology program related to the industrial development of the region.

(SSHR) July 1971, completed $146,500.

133. Science and Technology Policy Studies, Phase II
For the Commission of the Andean Common Market, to continue for a further three years work begun in Phase I on the strategy to be adopted by member countries towards the import of technology and the science and technology policies related to industrial development of the region, with detailed studies of particular sectors. This work also benefits Bolivia and Ecuador.

(SSHR) May 1973, 3 years $275,050.
134. Cassava Peru (CIAT)

For the Centro Internacional de Agricultura Tropical (CIAT), Cali, to assist the Government of Peru in establishing cassava as a food crop and in building up Peruvian research potential for continuing cassava research.

(AFNS) March 1974, 2 years $35,000.

See also projects 101, 102, 149, 151, 152 and 154.

ST. LUCIA

See project 125.

ST. VINCENT

See project 125.

SURINAM

135. Aerial Forest Survey (Surinam)

For the Department of the Environment of the Canadian Government, to assist its Forest Management Institute in carrying out tests on a radar altimeter, for use in aerial photography to complete forest and other resource inventories.

(AFNS) November 1972, completed $15,000.

TRINIDAD and TOBAGO

136. Osmotic Dehydration of Bananas and Mangoes

For the University of the West Indies, St. Augustine, Trinidad, to apply the results of a previous Osmotic Dehydration study (carried out by the Food Research Institute in Ottawa, see project 157), using freshly harvested produce in Trinidad and working in cooperation with small local industries.

(AFNS) April 1972, 15 months $10,800.

137. Cassava Mites (Trinidad)

For the Commonwealth Institute of Biological Control Station in Trinidad, to support research aimed at developing biological controls for a cassava mite infestation in East Africa through identification and study of the mite's natural enemies in Trinidad and adjacent areas.

(AFNS) 2 years $13,600.
138. Pasture Legumes (Caribbean)

For the University of the West Indies, St. Augustine, Trinidad, to help its Faculty of Agriculture in studies to find the most adaptable and productive forage legume species that can blend with the commonly used grasses in the drier parts of the Commonwealth Caribbean.

(AFNS) August 1972, 3 years $147,500.

See also projects 122, 123 and 149.

VENEZUELA

139. Simplified Medicine Program (Venezuela)

For the University of Venezuela, to enable its School of Public Health to evaluate the "simplified medicine" program in rural Venezuela for the possible application of a nation-wide expansion of this program, and to provide information in this field to other countries of the region.

(PHS) November 1973, 1 year $44,500.

See also projects 132, 133, 151, 152 and 153.

Other Countries

Small experiments for project 138 are taking place in Antigua and Belize, for project 123 in Guyana and for project 122 in Antigua.

GLOBAL

140. WHO Human Reproduction Special Fund

For the World Health Organization, Geneva, for its program of expanded research into human reproduction and fertility control, including provision of a Canadian consultant for two years.

(PHS) March 1972, 2 years $180,000.

141. World Framework for Population Research

For the World Health Organization, Geneva, to help elaborate through consultants, meetings and other exchanges, the WHO Expanded Program of Research, Development and Research Training in Human Reproduction, with the aim of improving means of fertility regulation.

(PHS) September 1971, completed $52,000.
142. International Committee for Applied Research in Population (ICARP)

For the Population Council, New York, for support of ICARP, a collaborative network composed of representatives of Latin American and 4 Asian countries, to identify and pursue action research leads in population and family planning in developing areas.

(PHS) January 1973, 1 year $100,000.

143. International Committee on Contraceptive Research (ICCR)

For the Population Council, to enable the ICCR to undertake further research on the most promising contraceptive methods and facilitate close cooperation between the ICCR, the WHO Expanded Program in Reproduction and other international agencies.

(PHS) March 1974, 2 years $500,000.

144. Aligned Descriptor List

For the Organization for Economic Cooperation and Development (OECD), Paris, to support its Development Centre's work in preparing a thesaurus which will help standardize development terms in several languages for describing and indexing documents.

(IS) May 1971, completed $38,700.

145. Macrothesaurus (Spanish edition)

For the Organization for Economic Cooperation and Development (OECD), Paris, to assist in producing a Spanish version of the Macrothesaurus, formerly called the Aligned Descriptor List - see project 144) of development terms already available in English and French through IDRC assistance.

(IS) March 1973, completed $6,000.

146. Compass: Multi-Agency Data Base

For the Inter-Organization Board for Information Systems and Related Activities (IOB), Geneva, to assist the IOB in creating a multi-agency data base with records from nearly 100,000 documents and publications from existing computerized data bases of certain UN agencies.

(IS) August 1972, 1 year $60,900.

147. CARIS Evaluation

To enable the Information Sciences Division of the IDRC to evaluate the effectiveness of a pilot project for the Computerized Agricultural Research Information System (CARIS) proposed by the Food and Agriculture Organization of the United Nations.

(IS) January 1973, 8 months $18,230.

148. Regional Seminars on Development and Environment

For the UN Conference on the Human Environment to support four regional seminars held at Bangkok, Thailand; Addis Ababa, Ethiopia; Mexico and Beirut, Lebanon, in preparation for the June 1972 Stockholm conference.

(SSHR) August 1971, completed $40,000.
149. Unified Approach to Development and Planning

For the United Nations Research Institute for Social Development, to carry out a study in 8 countries which will review prevailing theories and practices of unified development and planning, and will seek to uncover or test new ideas and principles to assist planners and decision makers.

(SSHR) July 1971, 2 years $30,250.

150. STRIGA (Sussex)

To cover the two years' residence of a Canadian organic chemist who will work at the University of Sussex, England, on developing a cheap synthetic stimulant which can cause the seed germination of a parasitic weed of grasses called Striga.

(AFNS) June 1973, 2 years $28,700.

151. Rural-Urban Migrants

For the International Association for Metropolitan Research and Development (INTERMET) in Toronto, to carry out a study of the causes and processes of rural migration to eight metropolitan areas: Bandung, Indonesia; Caracas, Venezuela; Lagos, Nigeria; Istanbul, Turkey; Kuala Lumpur, Malaysia; Lima, Peru; Manila, Philippines; and Seoul, Korea.

(SSHR) April 1972, 2 years $84,600.

152. Rural-Urban Migrants - Final Conference

For policy makers, researchers and administrators to analyze the findings of the comparative studies of rural-urban migrants and metropolitan development carried in eight cities throughout the world, and exchange views on the policy implications.

(SSHR) June 1973, completed $90,000.

153. Science and Technology Policy Instruments, Part 1

For the Financiadora de Estudos e Projetos (FINEP), Brazil; the National Committee on Science and Technology, India; the University of Skopje, Yugoslavia (Macedonia); El Colegio de Mexico; the Korea Advanced Institute of Science; and the Science Council of Venezuela (CONICIT); to identify appropriate policy instruments for relating science and technology to the development objectives of each participating country.

(SSHR) 1973, 2½ years $485,472.

154. Science and Technology Policy Instruments, Part 2

For the Latin American Social Science Research Council, Argentina; the Colombian Science Council, Colombia; the National Planning Institute, Peru; the University of Ife, Nigeria; and the National Academy of Scientific Research and Technology, Egypt; to identify appropriate policy instruments for relating science and technology to the development objectives of each participating country. These five institutions will join six others in Brazil, India, Macedonia, Mexico, South Korea and Venezuela, in this network of research.

(SSHR) 2½ years $450,962.

See also projects 91 and 92.
155. Composite Flours (Manitoba), Phase I
For the Plant Science Department of the University of Manitoba, to develop systems of mechanical dough development of composite flour mixtures using various dough-making machines that are hand-operated and simple to make.
(AFNS) August 1971, 2 years $20,000.

156. Composite Flours (Manitoba), Phase II
For the University of Manitoba, to determine how the mixing of flours from tropical plants such as cassava and sorghum with wheat flour affects the quality of bread made in machines described in project 155.
(AFNS) May 1974, 1 year $9,300.

157. Osmotic Dehydration of Food
For the Canada Department of Agriculture, to develop at its Food Research Institute an improved and inexpensive system of dehydration by osmosis, using sugar or salt as the plasmolyzing agents, and applying the process to tropical fruit and fish.
(AFNS) March 1971, completed $6,000.

158. Drought Resistance (Laval)
For Laval University in Quebec City, to enable its Faculty of Agriculture to study in its climatically controlled growth chambers the plant physiology of sorghum as it relates to drought resistance.
(AFNS) January 1973, 2 years $76,800.

159. Drought Tolerance (Saskatoon)
For the University of Saskatchewan, to identify the hormonal influences which affect drought tolerance in sorghum and provide indices by which plant breeders can select the highest yielding lines when grown under drought conditions.
(AFNS) April 1974, 5 years $672,000.

160. Trypanosomiasis (Guelph)
For the University of Guelph, Ontario, to provide support for an immunologist working on the trypanosomiasis diseases, especially sleeping sickness, for eventual transfer of research techniques to an institute in East Africa.
(AFNS) May 1973, 1 year $18,000.

161. Rural Grain Milling Systems
For the Food Science Department of the University of Guelph, Ontario, to test a dehusking and milling device invented by a Canadian milling engineer on a variety of grains in North-East Nigeria.
(AFNS) July 1971, completed $15,050.
162. Food Legume Processing (PRL)
For the Prairie Regional Laboratory of the National Research Council of Canada, Saskatoon, to conduct research in the milling of food legumes and cereals in support of current milling research being conducted in Nigeria.
(AFNS) October 1973, 18 months $26,200.

163. Food Legume Utilization (Saskatoon)
For the University of Saskatchewan, to carry out a systematic study of the properties of various legume and cereal flours, their processing and cooking properties in support of applied milling research at the Prairie Regional Laboratory and in Nigeria.
(AFNS) December 1973, 2 years $26,400.

164. Gonadotropin (University of British Columbia)
For the University of British Columbia, Vancouver, to conduct research on the induced spawning of Indian and Chinese carps.
(AFNS) September 1973, 4 months $15,375.

165. Bovine Diseases (Guelph)
For the University of Guelph, Ontario, to study the immunologic responses to Trypanosoma congolense, the organism responsible for Trypanosomiasis in cattle, and thus lay the groundwork for the development of successful vaccines against the disease.
(AFNS) January 1974, 2 years $144,000.

166. Winter Triticale (Guelph)
For the College of Agriculture, University of Guelph, Ontario, for the selection and testing of high-yielding winter triticale developed at CIMMYT, the University of Manitoba and elsewhere.
(AFNS) April 1974, 3 years $15,000.

167. Cassava/Swine Advisory Committee
To cover expenses for meetings of an advisory committee set up to guide the IDRC in its management of the $3.25 million grant made by CIDA for research in Colombia and at Canadian research institutions on cassava and its use as animal feed.
(AFNS) June 1972, completed $6,800.

168. Triticale Advisory Committee
To fund expenses for meetings of an advisory committee set up to assist the IDRC in its management of the $3.25 million grant made by CIDA for triticale research in Mexico and in various Canadian institutions.
(AFNS) June 1972, completed $13,500.

169. Arabic Script Processor
For the University of Montreal, to help complete the development of an electronic processor which can speed the transfer of information in Arabic script while maintaining the aesthetic qualities of its calligraphy.
(IS) February 1973, 18 months $27,458.
170. Science Forum Subscriptions
To enable the International Development Research Centre to provide subscriptions of Science Forum magazine to individuals and agencies in developing countries over the next three years.
(IS) June 1972, 3 years $35,000.

171. Apiculture Collection
For the University of Guelph, Ontario, to permit its McLaughlin Library to acquire an important collection of documents and specimens relating to bee-keeping, and to use it for the benefit of bee-keepers in developing countries, particularly East Africa.
(IS) November 1973, completed $10,000.

172. Library and Internal Information Services
To establish a working library, with publications and books focussing on the Centre's four sectors of concentration, to assist IDRC staff and other research specialists in their professional work.

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>1971-72</td>
<td>$89,533.</td>
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<tr>
<td>1972-73</td>
<td>$162,119.</td>
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<tr>
<td>1973-74</td>
<td>$315,000.</td>
</tr>
<tr>
<td>1974-75</td>
<td>$340,000.</td>
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</tbody>
</table>

173. Computer Information System (ISIS)
To put into operation at the International Development Research Centre the integrated Set of Information Systems (ISIS) for information storage and retrieval and for handling library management tasks.

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973-74</td>
<td>$195,000.</td>
</tr>
<tr>
<td>1974-75</td>
<td>$225,000.</td>
</tr>
</tbody>
</table>

174. Collaborative Fertility Research (Canada)
For the National Committee for Fertility Research, to administer a collaborative research program in centres across Canada, involving clinical trials of the Copper T intrauterine device and research in the use of Prostaglandins, a new fertility control agent.
(PHS) August 1972, completed $73,975.

175. Royal Society of Canada/International Foundation for Science
For the Royal Society as an initial subscription to the Stockholm-based International Foundation for Science, which aims to coordinate the resources of national scientific bodies to help young researchers in developing countries.
(SSHHR) November 1973, 1 year $125,000.

176. Non-Tariff Barriers to Trade
For the Private Planning Association of Canada, Montreal, to support a study to determine which non-tariff barriers are important in terms of distorting trade, and which are susceptible to reduction or elimination through the system of international trade negotiations.
(SSHHR) April 1971, completed $18,750.
177. CAAS - National Secretariat
For the Canadian Association of African Studies (CAAS), to establish a permanent national secretariat in Ottawa, enable it to provide continuity and expansion of its current activities, and facilitate contact between African and Canadian scholars through academic exchanges.

(SSH) May 1974, 2 years $66,000.

178. CALAS - National Secretariat
For the Canadian Association of Latin American Studies (CALAS), to establish a permanent national secretariat in Ottawa, improve and expand its current activities and facilitate the exchange of information between Canadian and Latin American scholars and researchers.

(SSH) January 1974, 2 years $34,683.

179. Human Resources Development
Grants are awarded at four different career levels to persons presently working in or expecting to work in the field of international development: the Ph.D. candidate, for support of thesis research, generally based on field work in a developing country; the junior staff members of Canadian universities, for travel funds to provide opportunity for research field experience in a developing country; the Research Associate (mid-career practitioner), for a "sabbatical year" of research or training to reorient or update his professional expertise as it applies to international development; and the Research Fellow (senior practitioner) who has made a substantial contribution to the development field, for a period for reflection and research.

The competition for the Ph.D., the Travel and Research and the Research Associate/Canada awards are open to Canadian citizens and landed immigrants in Canada. The Research Associate/developing country awards are open to candidates from developing countries. Research Fellows are appointed by the Centre's Executive Committee.

At March 31, 1974, the following awards had been made:

<table>
<thead>
<tr>
<th>Program</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Ph.D. candidates</td>
<td></td>
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<tr>
<td>Travel and Research</td>
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<td>Research Associate/developing</td>
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<td>countries</td>
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<tr>
<td>Research Fellows</td>
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<tr>
<td>(SSH) 1974-75</td>
<td>$972,000.</td>
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</table>
Note on Projects no. 180 to 200
Projects no. 180 to 200 were funded with 2 grants of $750,000 each allocated by CIDA for research on triticale, cassava and swine at Canadian institutions. These projects are being carried out in cooperation with and in support of research being undertaken at the Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT) and the Centro Internacional de Agricultura Tropical (CIAT) (see projects no. 127 and 105). The total contribution by CIDA of $6.5 million to the triticale and cassava/swine research programs is being managed by IDRC on CIDA's behalf.

180. Cassava Chemotaxonomic Classification (McGill), Phase I
For McGill University, Montreal, to determine the feasibility of classifying CIAT's cassava germ plasm collection on the basis of phenol content, and the possibility of correlating the occurrence of these chemical compounds with agronomic and disease resistance characteristics.
Grant financed by CIDA: $9,890.
(AFNS)June 1972, completed

181. Cassava Chemotaxonomic Classification (McGill), Phase II
For McGill University, Montreal, for classification of the CIAT cassava germ plasm collection and to facilitate comparison of material from different geographic areas where quarantine restrictions would prevent free exchange of plant material.
Grant financed by CIDA: $44,624.
(AFNS)November 1972, completed

182. Cassava Chemotaxonomic Classification (McGill), Phase III
For McGill University, Montreal, to extend the analysis of the CIAT collection, and to carry out additional comparative studies of plant material from other parts of the world.
Grant financed by CIDA: $27,858.
(AFNS)January 1974, 1 year

183. Cassava Microbiology (Guelph), Phases I and II
For the University of Guelph, Ontario, to enable their Microbiology Department to develop processes for protein enrichment of cassava silage and starch factory sediments for use as livestock feed.
Grant financed by CIDA: Phase I - $82,114.
Phase II - $69,500.
(AFNS)
Phase I - July 1972, 2 years
Phase II - 1 year

184. Marketing Study (Guelph)
For the University of Guelph, Ontario, to analyze the global market potentials for cassava as food for humans, starch for industry and feed for animals, and to provide guidelines for CIAT's cassava program.
Grant financed by CIDA: $39,169.
(AFNS)July 1972, completed
185. Micronutrient Study (Guelph)
For the University of Guelph, Ontario, to enable its Department of Natural Resources to carry out a study of soil micronutrient deficiencies and excesses affecting the cassava plant.
Grant financed by CIDA: $10,170.
(AFNS) July 1972, 2 years

186. Growth Physiology (Guelph), Phase I
For the University of Guelph, Ontario, to enable its Crop Science Department to determine the growth response of cassava to a variety of environmental conditions and inputs in growth chambers and in field trials in Colombia.
Grant financed by CIDA: $8,310.
(AFNS) July 1972, completed

187. Growth Physiology (Guelph), Phase II
For the University of Guelph, Ontario, to continue to study the growth response of cassava to varying environmental conditions as well as its photosynthetic activity.
Grant financed by CIDA: $38,152.
(AFNS) September 1973, 2 years

188. Growth Physiology (CIAT)
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia, to administer the salaries and allowances of the Guelph principal researcher and provide him with laboratory and research facilities as well as local support staff in relation to the study of the growth physiology of cassava by the University of Guelph.
Grant financed by CIDA: $43,815.
(AFNS) November 1973, 1 year

189. Cyanogenic Glycocides (Guelph), Phase I
For the University of Guelph, Ontario, to enable its Nutrition and Horticultural departments to determine the significance of cyanide toxicity in the cassava root and evaluate various techniques of producing and measuring the toxic components from cassava.
Grant financed by CIDA: $7,682.
(AFNS) July 1973, completed

190. Linamarin Study (Guelph), Phase II
For the University of Guelph, Ontario, to continue the study of dietary significance of linamarin and cyanide and its effects on the iodine metabolism and histopathology of nervous tissue.
Grant financed by CIDA: $18,054.
(AFNS) August 1973, 2 years
191. Cassava Production (Guelph)
For the University of Guelph, Ontario, to enable its School of Agricultural Economics and Extension Education to coordinate and support proposed studies in Brazil, Colombia, Thailand and Nigeria, on the identification of problems of cassava production.
Grant financed by CIDA: $65,000.
(AFNS) February 1974, 2 years

192. Plant Development of Cassava (PRL), Phase I
For the Prairie Regional Laboratory of the National Research Council, Saskatoon, to develop tissue culture techniques for the reproduction of cassava plants from somatic cells.
Grant financed by CIDA: $35,800.
(AFNS) June 1972, 2 years

193. Virus-Free Cassava (PRL), Phase II
For the Prairie Regional Laboratory of the National Research Council, Saskatoon, to extend the meristem culture technique, develop procedures for producing disease-free cassava plants and to determine their genetic stability.
Grant financed by CIDA: $32,000.
(AFNS) March 1974, 1 year

194. Cassava Mosaic Study (McGill)
For McGill University, Montreal, to identify and characterize the causal agents of cassava mosaic disease and to assess possible methods for its control.
Grant financed by CIDA: $94,234.
(AFNS) June 1973, 3½ years

195. Solar Drying (McGill)
For McGill University, Montreal, to conduct a pilot study on cassava drying by solar radiation.
Grant financed by CIDA: $4,353.
(AFNS) September 1973, completed

196. Liaison Officer (Canada/CIAT)
For the Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia, to cover the salary and expenses of a Colombian agronomist with the responsibility of selecting and expediting plant material for Canadian cassava studies.
Grant financed by CIDA: $10,000.
(AFNS) November 1972, completed
197. Triticale Research (Manitoba)
For the University of Manitoba, Winnipeg, to undertake triticale research in collaboration with the Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), Mexico, aimed at developing triticale lines which can be grown and utilized in the less developed tropics.
Grant financed by CIDA: $500,000.
(AFNS) September 1971, 5 years

198. Kernel Shrivelling (Manitoba)
For the University of Manitoba, Winnipeg, to enable its plant Science Department to undertake research involving a biochemical investigation of the factors producing kernel shrivelling in triticale.
Grant financed by CIDA: $50,000.
(AFNS) September 1972, 3 years

199. Spring Rye (Manitoba)
For the University of Manitoba, Winnipeg, to enable its Plant Science Department to conduct an intensive study of available rye material in order to isolate high-yielding spring rye strains for triticale breeding.
Grant financed by CIDA: $64,000.
(AFNS) March 1974, 3 years

200. Winter Triticale (Guelph)
For the University of Guelph, Ontario, to enable the University to expand its research in selecting and testing the highest-yielding winter triticale developed at CIMMYT, the University of Manitoba and elsewhere.
Grant financed by CIDA: $133,800.
(AFNS) April 1974, 3 years

See also projects 19, 20, 43, 49, 62, 93, 94, 95, 97, 135, 140, 150 and 151.
The International Development Research Centre is a public corporation established by Act of the Canadian Parliament "to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions, and, in carrying out those objects

(a) to enlist the talents of natural and social scientists and technologists of Canada and other countries;

(b) to assist the developing regions to build up the research capabilities, the innovative skills and the institutions required to solve their problems;

(c) to encourage generally the co-ordination of international development research; and

(d) to foster co-operation in research on development problems between the developed and developing regions for their mutual benefit."