

BIBLIOGRAPHIC INPUT SHEET

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AID/TA/AGR

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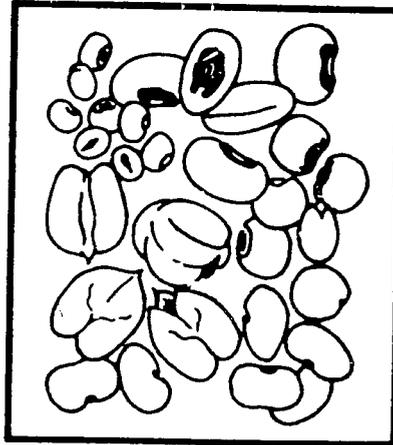
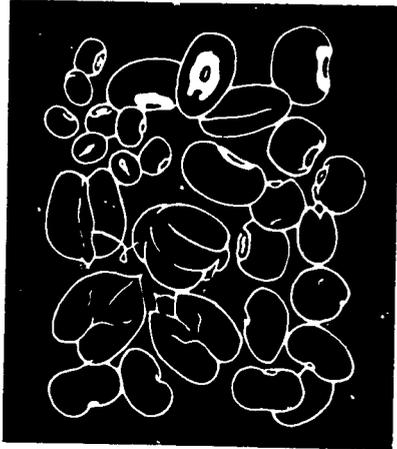
9. ABSTRACT

THE PROJECT: Facilitates communication among international and regional centers and institutions of the developed and developing nations via mutually supportive networks. Research, information and technical assistance linkages afford maximum research productivity, and maximum support for the expansion of the lesser-developed countries' research capabilities.

DURATION: 1973-1975

DEVELOPMENTS: Each of the seven publications in this series charts the major linkages within a particular network, and gives the function, services, and fund source for each of the network components. The reports include both AID and regional support projects, and a list of pertinent institutions and their addresses. To improve the situation of the lesser-developed countries farmer, the massing of resources is critical; these publications provide guidance on how useful linkages can be established.

10. CONTROL NUMBER PN-AAD-530	11. PRICE OF DOCUMENT				
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Mungbeans?	Pigeon peas?				
Networks					



INTERNATIONAL AGRICULTURAL RESEARCH NETWORKS

in

GRAIN LEGUMES

Bean (*Phaseolus vulgaris*)

Mungbean (*Vigna radiata*)

Cowpea (*Vigna unguiculata*)

Pigeon Pea (*Cajanus cajan*)

Chickpea (*Cicer arietinum*)

MARCH 1975

Office of Agriculture • TECHNICAL ASSISTANCE BUREAU • AGENCY FOR INTERNATIONAL DEVELOPMENT • Washington, D.C. 20523

ARC 635.65072-A-265

Network Series: AGR-06

International Agricultural Research Networks

for

Grain Legumes

Bean (Phaseolus vulgaris)

Mungbean (Vigna radiata)

Cowpea (Vigna unguiculata)

Pigeon pea (Cajanus cajan)

Chickpea (Cicer arietinum)

March 1975

Department of State

Agency for International Development
Washington, D. C. 20523

The International Grain Legumes Research Networks

This publication is one of a series released by the Office of Agriculture, Technical Assistance Bureau of the Agency for International Development (AID), for the purpose of fostering the development of mutually supporting networks among international and regional research centers and research and development institutions in the developed as well as the developing nations. It is hoped that by the establishment of these networks, the "critical massing" of resources necessary to solve the important agricultural problems of the LDCs can be achieved.

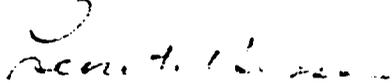
The charts immediately following show the major linkages and sources of funds in the Grain Legumes Research Networks. All linkages are not shown and, since this is a dynamic system, changes may be expected to occur with the passage of time.

The basic information on the networks required by operational personnel is presented in descriptive form in the tables immediately following the Grain Legumes Network charts. The "Components" column refers to the individual research institutions or systems which are working towards the development of the needed technology. Four International Institutes (IITA, ICRISAT, CIAT and AVRDC) are at the hubs of the research networks, with the other research institutions shown on the charts playing important supporting roles. Regional and national institutes also form important components, receiving benefit from, as well as contributing to, the worldwide networks. Other columns show "Functions" performed at each unit in the networks, "Services Available" from each, and how each is financed.

The next section views the networks in terms of AID support.

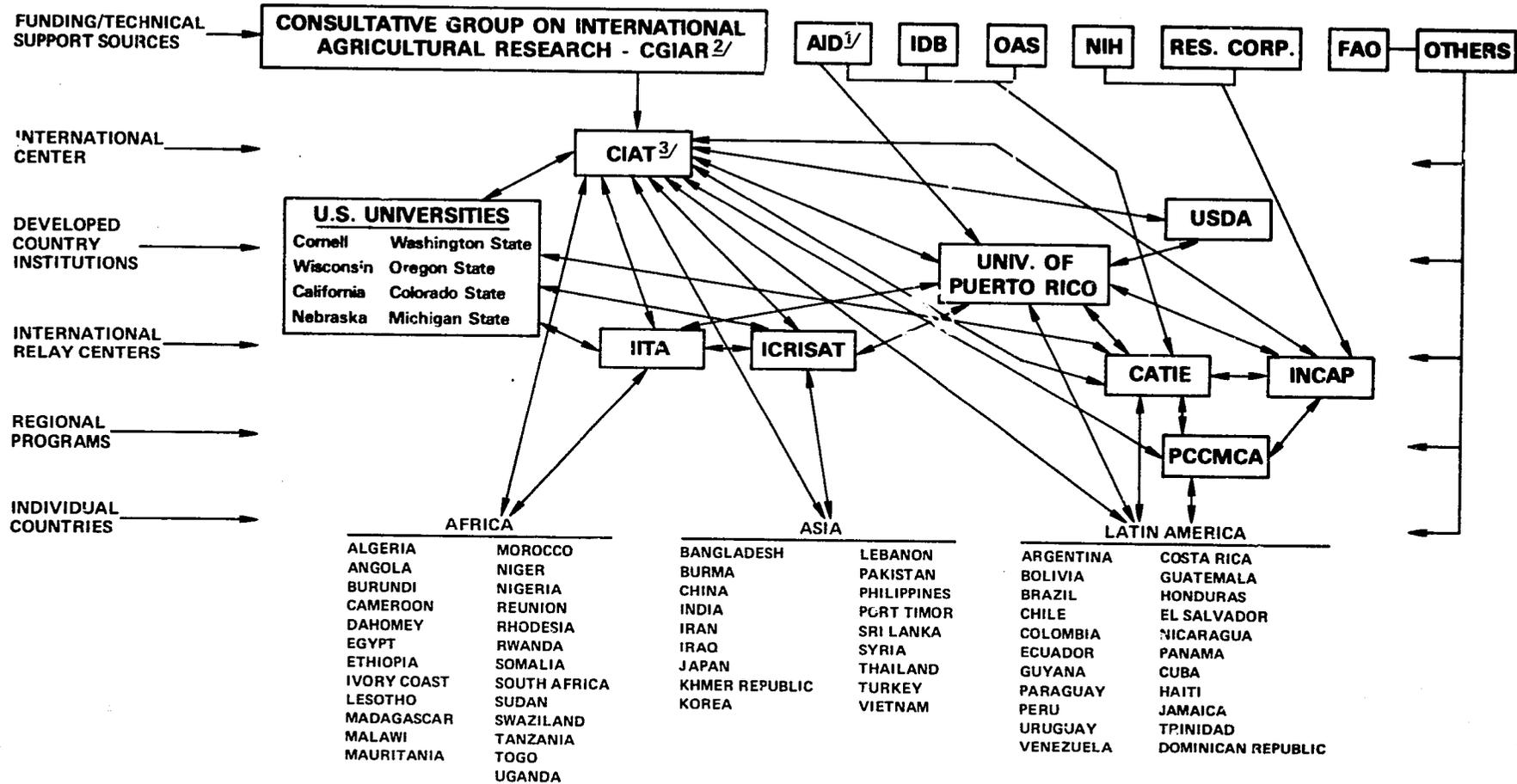
Finally, to facilitate communication, a list of the various institutions mentioned and their addresses is appended.

Users of the grain legumes networks are encouraged to comment on the specific or overall effectiveness of the system and to offer suggestions that may prove useful in the contemplated periodic updating of the publication. Communications should be addressed to this office.


Leon F. Hesser, Acting Director
Office of Agriculture
Technical Assistance Bureau

INTERNATIONAL BEAN RESEARCH NETWORK

MAJOR LINKAGES



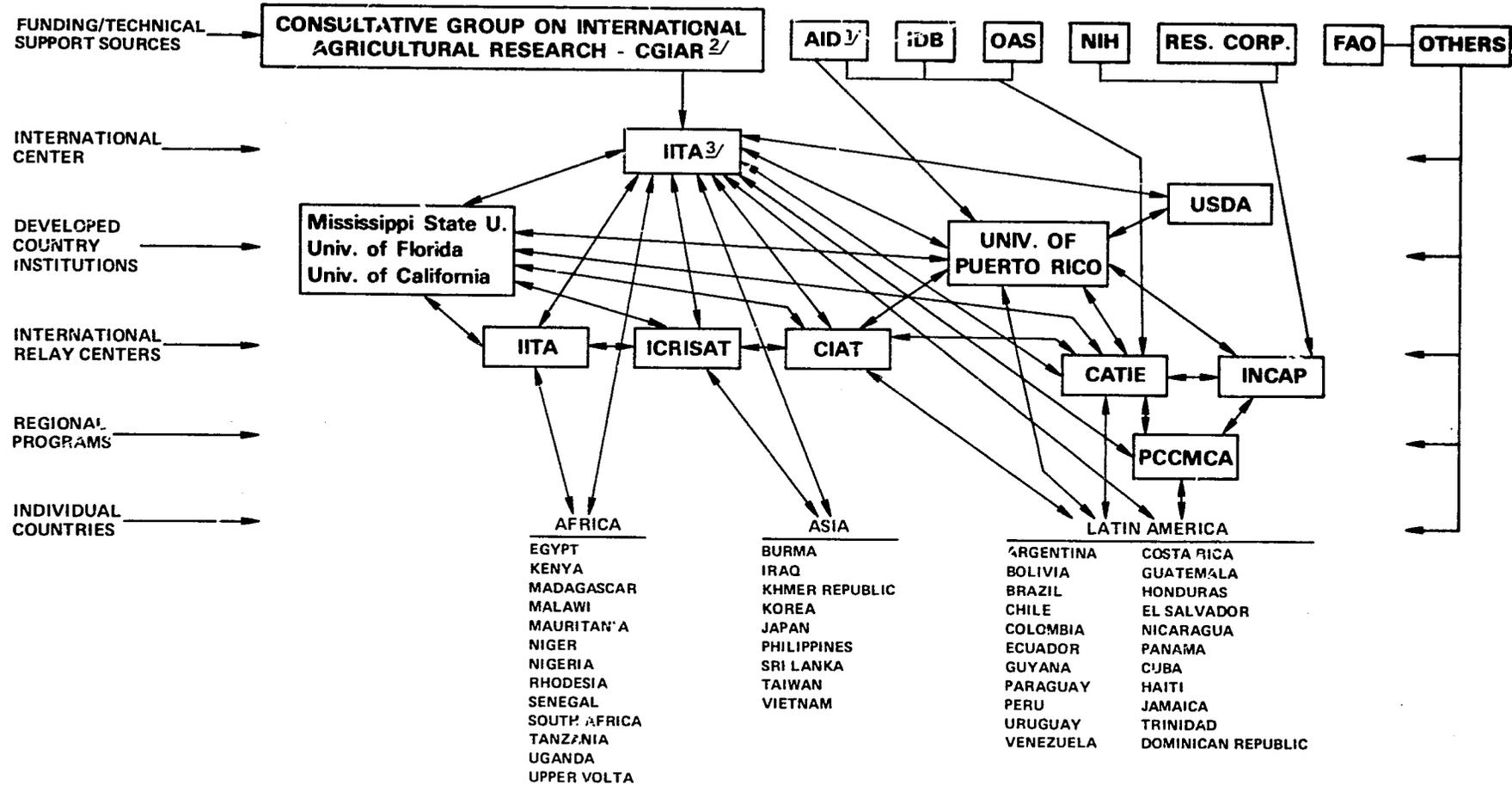
^{1/} AID IS SHOWN APART IN ORDER TO INDICATE FUNDING LINKAGES TO U.S. RESEARCH INSTITUTIONS. AID ALSO CONTRIBUTES THROUGH BILATERAL ARRANGEMENTS TO INDIVIDUAL COUNTRY PROGRAMS. OTHER DONOR MEMBERS OF CGIAR HAVE CORRESPONDING ADDITIONAL LINKAGES.

^{2/} MEMBERS OF THE CONSULTATIVE GROUP ARE BELGIUM, CANADA, DENMARK, FORD FOUNDATION, GERMANY, IDRC, JAPAN, KELLOGG FOUNDATION, NETHERLANDS, NORWAY, ROCKEFELLER FOUNDATION, SWEDEN, NIGERIA, SWITZERLAND, UNITED KINGDOM, UNDP, UNITED STATES, AND WORLD BANK.

^{3/} THE LINKAGES AMONG ELEMENTS OF THE INTERNATIONAL RESEARCH NETWORKS TAKE THE FORM OF THE EXCHANGE OF INFORMATION AND MATERIALS, COOPERATIVE RESEARCH PROGRAMS, TRAINING OF PERSONNEL, AND THE CONDUCT OF SEMINARS AND WORKSHOPS.

INTERNATIONAL COWPEA RESEARCH NETWORK

MAJOR LINKAGES



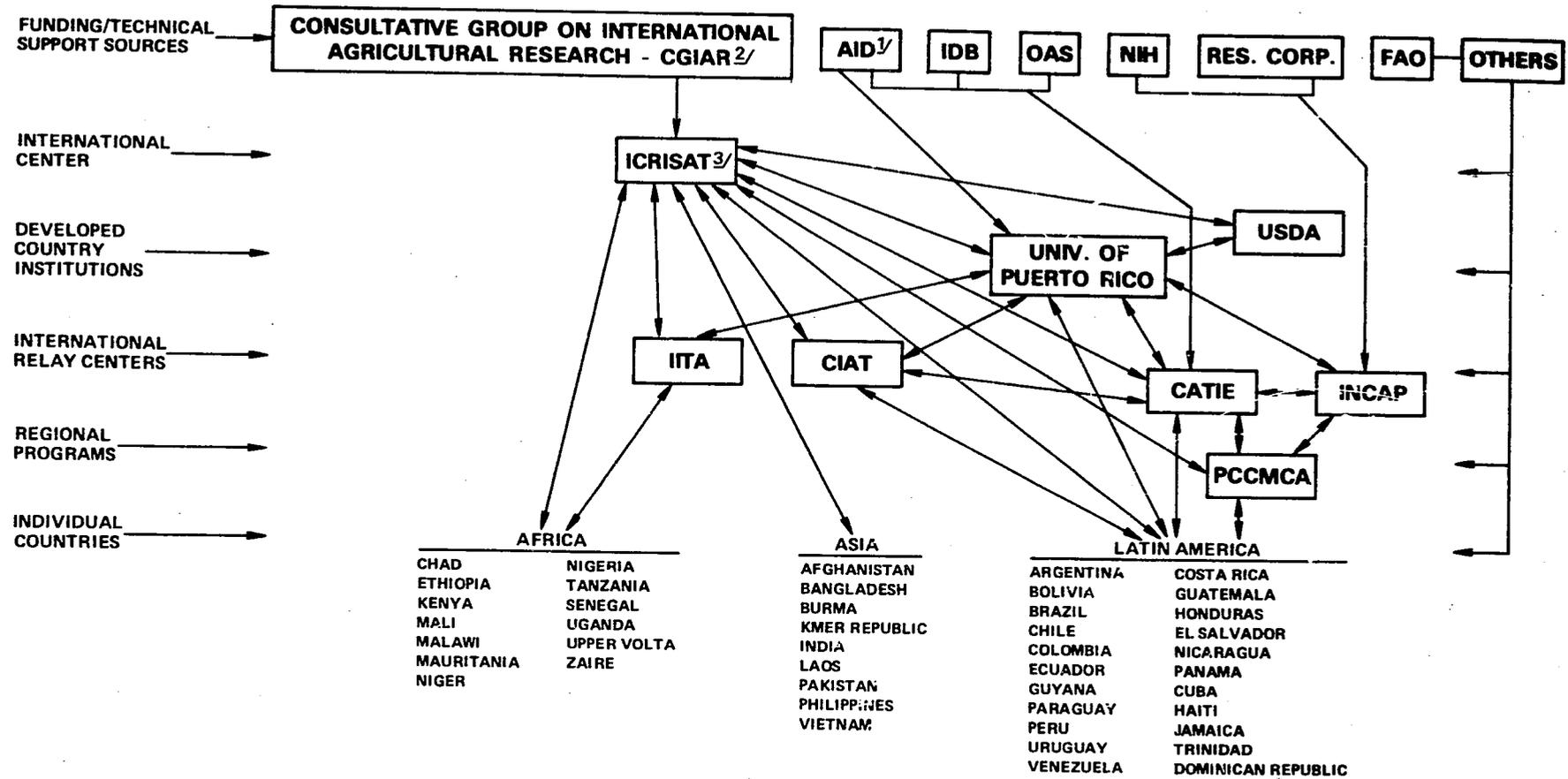
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INTERNATIONAL PIGEON PEA NETWORK

MAJOR LINKAGES



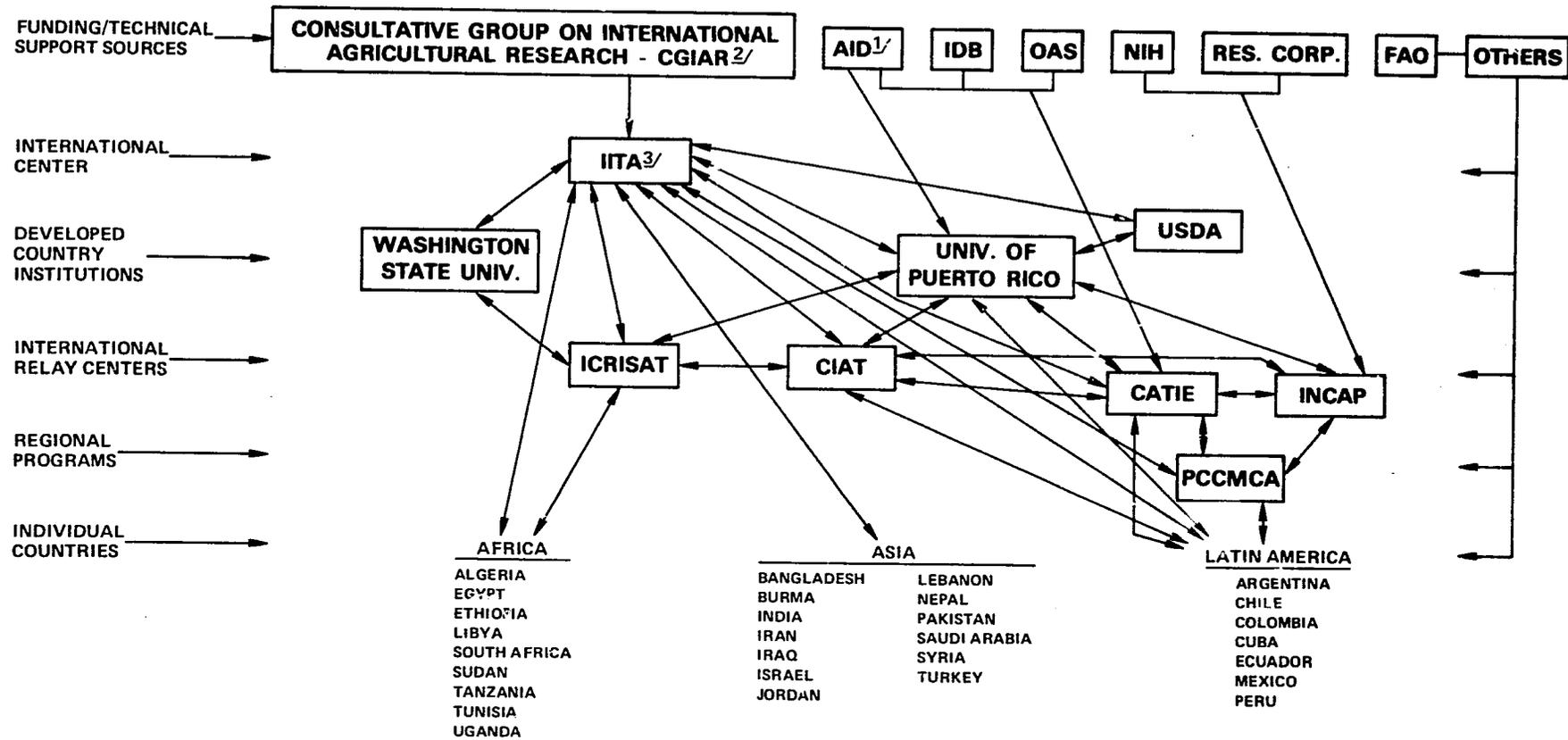
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INTERNATIONAL CHICKPEA NETWORK

MAJOR LINKAGES



- 1/ AID IS SHOWN APART IN ORDER TO INDICATE FUNDING LINKAGES TO U.S. RESEARCH INSTITUTIONS. AID ALSO CONTRIBUTES THROUGH BILATERAL ARRANGEMENTS TO INDIVIDUAL COUNTRY PROGRAMS. OTHER DONOR MEMBERS OF CGIAR HAVE CORRESPONDING ADDITIONAL LINKAGES.
- 2/ MEMBERS OF THE CONSULTATIVE GROUP ARE BELGIUM, CANADA, DENMARK, FORD FOUNDATION, GERMANY, IDRC, JAPAN, KELLOGG FOUNDATION, NETHERLANDS, NORWAY, ROCKEFELLER FOUNDATION, SWEDEN, NIGERIA, SWITZERLAND, UNITED KINGDOM, UNDP, UNITED STATES, AND WORLD BANK.
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INTERNATIONAL GRAIN LEGUME RESEARCH NETWORKS

COMPONENTS	FUNCTIONS	SERVICES AVAILABLE	SOURCE OF FUNDS
AVRDC - ASIAN VEGETABLE RESEARCH AND DEVELOPMENT CENTER, SHANHUA, TAINAN 741 TAIWAN	Research in selected vegetable crops, including an active research program in mungbeans. Serves as hub of mungbean re- search network.	Improved seed. Technical information, consultation, training. Assistance with workshops and seminars.	Cooperating East Asian Countries, Rockefeller Foundation. AID and bilateral arrangements.
CATIE - CENTRO AGRONOMOICO TROPICAL DE INVESTIGACION Y ENSEANZA, TURRIALBA, COSTA RICA	Assistance to regional and country programs in Latin America. Active research pro- gram in grain legumes.	Same as for AVRDC	OAS, IDB, AID, Govern- ment of Costa Rica and bilateral arrange- ment.
CIAT - INTERNATIONAL CENTER FOR TROPICAL AGRICULTURE, CALI, COLOMBIA	Serves as hub of bean research network and as relay center for cowpeas and mungbeans in Latin America. Comprehensive research program in grain legumes.	Same as for AVRDC	CGIAR, bilateral arrangements.
FAO - FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS.	Assistance to national programs through research and training. Screening of germplasm through regional projects.	Technical support to national programs, improved seed, train- ing, refresher courses, seminars and workshops, limited equipment.	UNDP and bilateral arrangements for specific projects.
ICRISAT - INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS, HYDERABAD, INDIA	Serves as hub of the pigeon pea and chickpea research net- works and relay center for cowpeas in Asia. Limited program in grain legumes research.	Same as for AVRDC	- do -

COMPONENTS	FUNCTIONS	SERVICES AVAILABLE	SOURCE OF FUNDS
IITA - INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE, IBADAN, NIGERIA	Serves as hub of cowpea research network and relay center for beans and soybeans in Africa. Active research program in grain legumes.	Same as for AVRDC	CGIAR, bilateral arrangements.
INCAP - INSTITUTO DE NUTRICION DE CENTRO AMERICA Y PANAMA, GUATEMALA CITY, GUATEMALA	Research on nutritional quality and utilization of foods.	Technical information; consultation; assistance with workshops and seminars.	NIH, Research Corporation.
MISSOURI - UNIVERSITY OF MISSOURI, COLUMBIA MISSOURI	Basic research and graduate training program for the improvement of the mungbean.	Same as for AVRDC	AID and State appropriations.
PCCMCA - PROGRAMA COOPERATIVO CENTROAMERICANO PARA EL MEJORAMIENTO DE CULTIVOS ALIMENTICIOS, SAN SALVADOR, EL SALVADOR	Outreach and program development for the countries of Central America plus Panama.	Consultation. Program development.	OAS
PUERTO RICO - UNIVERSITY OF PUERTO RICO, MAYAGUEZ, PUERTO RICO	Research on diseases and insect pests of grain legumes. Breeding for resistance, training.	Same as for AVRDC	AID, USDA
USDA - UNITED STATES DEPARTMENT OF AGRICULTURE, BELTSVILLE, MD.	Maintenance of germplasm; multidisciplinary research to meet U.S. needs in production, handling, storage, and utilization; cooperative USDA State research programs.	Source of germplasm, technical information, consultant services, training for advanced degrees.	U.S. Federal and State appropriations; AID

COMPONENTS	FUNCTIONS	SERVICES AVAILABLE	SOURCE OF FUNDS
WISCONSIN - UNIVERSITY OF WISCONSIN, MADISON,	Research on nutritional improvement of beans and training.	Same as for AVRDC	AID
LESS DEVELOPED COUNTRY AND COUNTRY DEVELOPED COUNTRY RESEARCH INSTITUTIONS AND PROGRAMS	Development of technology required by the country concerned, training, liaison with extension	Source of germplasm technical information consultant services; training.	Country appropriations; support for LDC programs from outside donors such as AID, UNDP, FAO, IBRD, Ford and Rockefeller Foundation.

AID SUPPORTING PROJECTS

TA/AGR Supporting Projects

Research

1. Evaluation of the Potential for Improvement of the Mungbean, University of Missouri.
2. Improvement of Tropical Production of Beans and Cowpeas through Disease and Insect Control, University of Puerto Rico.
3. Improving Protein Quality of Beans (Phaseolus sp.), University of Wisconsin.
4. Water Management Research in Arid and Sub-Humid Lands (2 projects), Colorado State University (Asia) and Utah State University (Latin America).
5. Agronomic-Economic Research on Tropical Soils, North Carolina State University.
6. Soil Fertility Requirements to Attain Efficient Production on Extensive, Deep, Well-drained, but Relatively Infertile Soils of the Humid Tropics, Cornell University.
7. Control of Weeds, Oregon State University.

General Technical Service

1. Budget support to ICRISAT, IITA, CIAT and AVRDC.
2. Pest Management and Related Environmental Protection, University of California.
3. Fertilizers, Technical Assistance, Survey, Training and Consultations, T.V.A.
4. Seed Program and Industry Development, Mississippi State University.
5. Plant and Seed Materials for Development of Potential Crops, USDA.
6. Technical Assistance in Food Grain Drying, Storage, Handling and Transportation, Kansas State University.

Regional Bureau Supporting Projects

Latin America

1. Budget support to CATIE.
2. Soil Fertility Project, North Carolina State University -- provides cooperative research support to national programs working on fertility problems.

Mission Level Support

Support is provided to strengthen country-level research programs and supporting activities such as training. Other activities supported at this level are international testing and seed exchange; cooperative production and/or research programs; and seminars and workshops.

MAILING ADDRESSES OF INSTITUTIONS MENTIONED

AID Agency for International Development
Department of State
Washington, D. C. 20523

AVRDC Asian Vegetable Research and Development Center
P. O. Box 42
Shanhua, Tainan 741
Taiwan

CATIE Centro Agronomico Tropical de Investigacion
y Ensenanza
Turrialba, Costa Rica

CIAT Centro International de Agricultura Tropical
Apartado Aereo 67-13
Cali, Colombia

CGIAR Consultative Group on International Agricultural Research
International Bank for Reconstruction and Development
1818 H Street, N.W.
Washington, D. C. 20433

FAO Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalla 00100
Rome, Italy

FORD The Ford Foundation
320 E. 43rd Street
New York, New York 10017

IBRD International Bank for Reconstruction and Development
(World Bank)
1818 H. Street, N.W.
Washington, D. C. 20433

ICRISAT International Crops Research Institute for the Semi-Arid Tropics
1-11-256, Begumpet
Hyderabad 16, A. P.
India

IDB Inter-American Development Bank
808 17th Street, N.W. (Annex A)
Washington, D. C. 20577

IDRC International Development Research Center
P. O. Box 8500
Ottawa, Canada

IITA International Institute of Tropical Agriculture
Oyo Road
P. M. B. 5320
Ibadan, Nigeria

INCAP Instituto de Nutricion de Centro America y Panama
Apartado 1188
Guatemala City, Guatemala

NIH National Institute of Health
9000 Rockville Pike
Bethesda, Maryland 20014

OAS Organization of American States
General Secretariat
17th and Constitution Ave., N.W.
Washington, D. C. 2006

PCCMCA Programa Cooperative Centroamericano para el Mejoramiento
de Cultivos Alimenticios
Instituto Interamericano de Ciencias Agricolas - Zona Norte
Apartado 1688 - Sucursal 1
San Salvador, El Salvador

RES. CORP. Research Corporation
 405 Lexington Avenue
 New York, New York 10017

ROCKEFELLER The Rockefeller Foundation
 111 West 50th Street
 New York, New York 10020

TA/AGR Office of Agriculture
 Technical Assistance Bureau
 Agency for International Development
 Washington, D. C. 20523

TVA National Fertilizer Development Center
 Tennessee Valley Authority
 Muscle Shoals, Alabama 35660

UNDP United Nations Development Programs
 799 United Nations Plaza
 New York, New York 10017

USDA U. S. Department of Agriculture
 Agricultural Research Service
 Washington, D. C. 20250

U. S. UNIVERSITIES

CALIFORNIA	College of Agricultural and Environmental Sciences University of California Davis, California 95616
COLORADO	The College of Agricultural Sciences Colorado State University Fort Collins, Colorado 80521
CORNELL	The College of Agriculture and Life Sciences Cornell University Ithaca, New York 14850
FLORIDA	Institute of Food and Agricultural Sciences University of Florida Gainesville, Florida 32601
IDAHO	College of Agriculture University of Idaho Moscow, Idaho 83843
MICHIGAN	The College of Agriculture and Natural Resources Michigan State University East Lansing, Michigan 48823
MISSOURI	The College of Agriculture University of Missouri Columbia, Missouri 65201
MISSISSIPPI	The College of Agriculture Mississippi State University State College, Mississippi 39762
WISCONSIN	The College of Agriculture and Life Sciences Wisconsin University Madison, Wisconsin 53706

FOOTNOTES

- 1/ AID is shown apart in order to indicate funding linkages to U.S. research institutions. AID also contributes through bilateral arrangements to individual country programs, and to the secondary centers shown. Other donor members of CGIAR have corresponding additional funding linkages.
- 2/ Members of the Consultative Group are Belgium, Canada, Denmark, Ford Foundation, Germany, IDRC, Japan, Kellogg Foundation, Netherlands, Norway, Rockefeller Foundation, Sweden, Nigeria, Switzerland, United Kingdom, UNDP, United States, and World Bank.
- 3/ The linkages among elements of the International Research Networks take the form of the exchange of information and materials, cooperative research programs, training of personnel, and the conduct of seminars and workshops.