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**Folder ID:** 1768303

**Series:** United States Agency for International Development (USAID) CGIAR files

**Dates:** 01/01/1974 - 07/01/1974

**Fonds:** Records of the Consultative Group on International Agricultural Research (CGIAR)

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Washington, D.C.

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**PUBLIC DISCLOSURE AUTHORIZED**

Consultative Group on International  
Agricultural Research (CGIAR)  
Jan-June 1974 03



   
**1768303**  
R1999-045 Other #: 1 Box # 201307B  
CGIAR: Copies of US AID Records Related to the Consultative Group on International  
Agricultural Research - Correspondence 03

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File  
CG

STATE - A.I.D. - USIA ROUTING SLIP				DATE 6/7/74		
TO:	Name or Title	Urgen. Symbol	Room No.	Bldg.	Initials	Date
1.	<i>Halmes</i>					
2.						
3.						
4.						
5.						
Approval		For Your Information		Note and Return		
As Requested		Initial for Clearance		Per Conversation		
Comment		Investigate		Prepare Reply		
File		Justify		See Me		
For Correction		Necessary Action		Signature		
REMARKS OR ADDITIONAL ROUTING						
<p>The attached provides data on outreach activities of the international agricultural research centers for 1973. Any comments will be appreciated.</p>						
FROM: (Name and Org. Symbol)				ROOM NO. & BLDG.	PHONE NO.	
TA/AGR, Guy B. Baird				2243 NS	27921	

Data on International Centers for 1973

*Holmes*

Center	Outreach Projects	Senior Scientist Advisory-Consultant: Visits to LDCs	Trainees at Center	Workshops/Seminar	Countries Receiving Germplasm	Publications Sent to LDCs
CIMMYT	9: Pakistan Egypt, Tunisia, Turkey, Algeria, Zaire, Nepal, Lebanon, Tanzania,	<u>LDCs:</u> 41 countries 207 countries 1,117 man-days  <u>Developed countries:</u> 13 countries 101 visits 536 man-days	35 countries 99 trainees + workshops/ 3 from USSR	3 workshops/ seminars	63	98 countries 3,929 individuals 1,056 institutions
IRRI	11: Sri Lanka (2), Bangladesh, Indonesia (3), South Vietnam, UAR, Philippines, India, Egypt, Pakistan, (20 IRRI scientists assigned in LDCs)	<u>LDCs:</u> 7 countries 10 visits  <u>Developed countries:</u> 4 countries 20 visits	20 countries  126 trainees	5 workshops/ seminars 215 participants	50	2,000 rice scientists (annual rpt.) 4,000 (IRRI Reporter)
CIAT	1: Guatemala	16 countries 70 visits	16 LDCs and 8 developed countries  159 trainees	4 workshops/ meetings  228 LDC participants	15 maize 15 bean 25 rice 19 cassava	1,155 institutions  1,514 persons
IITA	6: Sierra Leone, Liberia, Cameroun, Zaire, Tanzania, Nigeria	17 countries 65 visits	15 countries 53 trainees	8 workshops/ seminars 239 LDC participants	36	1,200 persons



Center	Outreach Projects	Senior Scientist Advisory-Consultant Visits to LDCs	Trainees at Center	Workshops/Seminars	Countries Receiving Germplasm	Publications Sent to LDCs
CIP	2 regional projects: Mexico and Lebanon		3 regional training courses 34 trainees from 11 countries 8 M.S. and 5 Ph.D degree programs	2 planning conferences		
ICRISAT <sup>1/</sup>	0 (Anticipate projects in Africa in 1975)	8 countries 15 visits	0 (workshops are scheduled in 1974)	0		Not tabulated
DC <sup>1/</sup>	0 (currently attempting to arrange in Korea, Thailand, Philippines, Indonesia and Bangladesh)	30 visits	0 (training program will start in late 1974)	0	20	1,000

<sup>1/</sup>

ICRISAT and AVRDC are new Centers and the research, outreach and training programs are for the early stages of development.

C S  
File

May 29, 1974

Mr. Harold Graves  
Executive Secretary  
Consultative Group on International  
Agriculture Research  
IBRD  
1818 H Street, N.W.  
Washington, D. C. 20433

Dear Harold:

Further to your letter of May 5 and Joel's interim reply of May 15, I wish to confirm that we are proceeding with arrangements to provide \$108,000 to WARDA, and an additional \$242,000 to ILRAD (making a total for 1974 of \$342,000 to that laboratory). With these allocations there would be no "unallocated" funds in the last column of your table. Otherwise, the figures are correct as shown.

Sincerely yours,

Omer J. Kelley  
Director  
Office of Agriculture  
Technical Assistance Bureau

Clearance:

TA/AGR RHolmes                     

TA/AGR/GBBaird/sad/5-29-74



DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523

ASSISTANT  
ADMINISTRATOR

May 15, 1974

Mr. Harold Graves  
Executive Secretary  
Consultative Group on International  
Agriculture Research  
IBRD  
1818 H Street, N. W.  
Washington, D. C. 20433

Dear Harold:

Thank you for your letter enclosing the sheet showing allocations from Consultative Group members to international agricultural research programs in calendar year 1974.

With a few exceptions data shown on your enclosed sheet as grants by AID are correct. The exceptions are: \$100,000 to ILRAD instead of \$330,000, and \$108,000 to WARDA instead of \$110,000. I understand that AID has \$242,000 to apportion between ILRAD and ILCA.

Upon Dr. Guy Baird's return early next week he will discuss with you the apportionment.

Sincerely,

/s/

Joel Bernstein

C. G. J. W.

Feb. 28/75

Ryland:

Attached are two tables (one  
new) which summarize the  
information you asked about  
earlier this week.

PB



AID CONTRIBUTIONS TO CORE AND CAPITAL BUDGETS OF  
INTERNATIONAL RESEARCH CENTERS AND PROGRAMS 1/  
(Millions of U.S. Dollars)

<u>Calendar Year</u>	<u>IRRI</u>	<u>CIMMYT</u>	<u>IITA</u>	<u>CIAT</u>	<u>CIP</u>	<u>ICRISAT</u>	<u>ILCA</u>	<u>ILRAD</u>	<u>ICARDA</u>	<u>IBPGR</u>	<u>WARDA</u>
1969 <u>2/</u>	--	0.425	--	--	--	--	--	--	--	--	--
1970 <u>2/</u>	0.475	0.625	0.320	0.259	--	--	--	--	--	--	--
1971 <u>2/</u>	1.000	0.769	0.535	0.680	--	--	--	--	--	--	--
-----											
1972	0.750	1.090	0.746	0.721	0.100	0.100	--	--	--	--	--
1973	0.725	1.500	1.200	0.875	0.340	0.745	--	--	--	--	--
1974	1.100	1.350	1.500	0.950	0.550	1.000	0.100	0.342	--	--	0.108
-----											
1975 prelim. <u>4/</u>	1.925	1.765	2.060	1.230	0.575	2.060	0.140	0.540	0.050	0.080	0.120
-----											
6 proj. <u>5/</u>	1.800	2.100	2.100	1.700	0.700	2.600	1.200	1.300	0.800	0.300	0.200
1977 proj. <u>5/</u>	2.100	2.300	2.200	2.100	0.900	1.900	1.800	1.000	1.000	0.400	0.200

<u>CARIS</u>	<u>OTHER</u>	<u>AID Total</u>	<u>Other Donors</u>	<u>Total All Donors</u>	<u>AID as Prop. of Total - percent -</u>
--	--	0.425	9.664 <u>3/</u>	10.089 <u>3/</u>	4.2
--	--	1.679	8.763	10.442	16.1
--	--	2.984	11.900	14.884	20.0
-----					
--	--	3.507	10.481	13.988	25.1
--	--	5.385	19.250	24.635	21.9
--	--	7.000	26.775	33.775	20.7
-----					
.075	0.380	11.000	37.160	48.160	22.8
-----					
.050	0.150	15.000	45.000	60.000	25.0
--	0.600	16.500	49.500	66.000	25.0



Notes:

- 1/ Applies to centers and programs conducted under the aegis of the Consultative Group on International Agricultural Research (CGIAR). The Consultative Group was established in May 1971 and the first funding provided for 1972. Special projects are excluded. In addition, AID contributes to the Asia Vegetable Research and Development Center and the International Fertilizer Development Center.
- 2/ The data for this year, which preceded the establishment of the CGIAR, are subject to some variation, depending on the source chosen. Here subsequent budget reports of the individual centers have been chosen. The figures differ in several instances from those cited by Baird; this may be in part due to attribution to different years. The first four institutes listed (IRRI, CIMMYA, IITA, and CIAT) were in operation in 1969.
- 3/ Center expenditures.
- 4/ Some minor reallocations may be made; other category represents presently unallocated funds.
- 5/ Very preliminary and rough; subject to considerable future revision.

Sources of AID data:

1969. This is CIMMYT, Information Bulletin No. 8, March 1974, Chart 15/1. (Provides similar data for 1971-1973.)
- 1970-1971. Taken from Proposed Budgets for individual centers submitted to CGIAR in 1973 and 1974, Table III.
- 1972-1974. Guy Baird, "A Note on the Consultative Group on International Agricultural Research," AID/TAB, June 26, 1974. (Similar data for 1973 and 1974 are provided in the Action Memorandum for the AID Administrator, July 20, 1973, and July 26, 1974.) IITA data for 1972 from IITA Budget Proposals for 1974 and 1975, Table III.
1975. Information Memorandum from AA/TA to the Administrator, AID, December 6, 1974, Table 1. The figure reported in this table include a small subsequent shift in funds from CARIS to other.
- 1976-1977. Projections made by Dana Dalrymple, partially on the basis of data provided in "An Integrative Paper (1975-78)", CGIAR Secretariat, January 1975, p. 16. The AID contribution was calculated at 25% of the budget requests (which were originally made in the summer of 1975) and then rounded off; in some cases where current information suggest an increase in costs they were rounded to a higher number.

Sources of Other Data:

1969. Dana G. Dalrymple, "Evaluating the Impact of International Agricultural Research on Wheat and Rice Production in the Developing Nations," USDA/ERS, February 1975, p. 6.
- 1970-71 Same as above for similar period.
- 1972-75 CGIAR Secretariat.

Millions of Dollars

AID CONTRIBUTIONS TO CORE AND CAPITAL BUDGETS OF  
INTERNATIONAL AGRICULTURAL RESEARCH CENTERS & PROGRAMS  
(Under CGIAR Sponsorship)

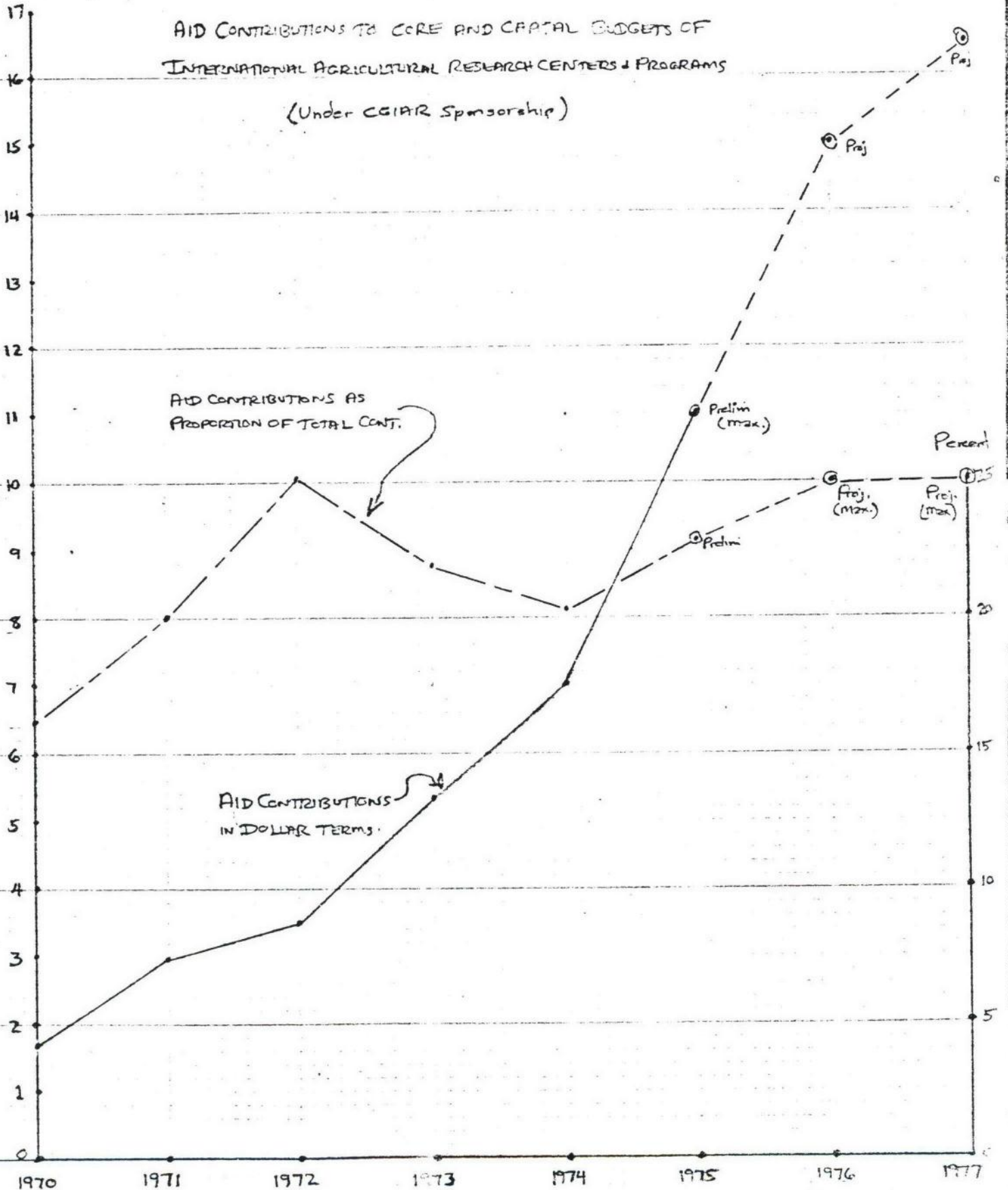




Table 1. ANNUAL TOTAL EXPENDITURES (CORE AND CAPITAL)  
SIX INTERNATIONAL AGRICULTURAL RESEARCH CENTERS\*1/

YEAR	IRRI	CIMMYT	IITA	CIAT	CIP <sup>4/</sup>	ICRISAT	TOTAL
	- thousands of dollars -						
1959	250 <sup>2/</sup>	-	-	-	-	-	250
1960	7,060 <sup>2/</sup>	-	-	-	-	-	7,060
1961	229 <sup>2/</sup>	-	-	-	-	-	229
1962	405 <sup>2/</sup>	-	-	-	-	-	405
1963	875 <sup>2/</sup>	-	-	-	-	-	875
1964	625 <sup>2/</sup>	3/	-	-	-	-	625
1965	1,055	5/	250 <sup>4/</sup>	-	-	-	1,305
1966	1,125	457	350 <sup>4/</sup>	-	-	-	1,932
1967	1,164	863	1,000 <sup>4/</sup>	-	-	-	3,027
1968	1,641	1,427	1,034 <sup>4/</sup>	51	-	-	4,153
1969	1,955	2,053	4,490	1,591	-	-	10,089
1970	2,135	5,017	4,505	2,143	-	-	13,800
1971	2,676	4,836	6,816	3,444	-	-	17,772
1972	2,960	4,942	6,397	4,317	492	342	19,450
1973	3,084	6,231	6,148	6,126	1,280	2,710	25,579
1974(est.)	4,557	5,563	6,423	6,082	2,055	5,600	30,280
1975(prop.)	8,520	6,854	7,746 <sup>6/</sup>	5,828	2,403	10,250	41,582

## Notes:

- 1/ Data refer, except as noted, to actual total expenditures. In most of the source tables for 1970 to 1975 this category is referred to as "application of funds" (exclusive of funds carried over to the following year). It includes, in addition to funds obtained from the Consultative Group (CG), or individual donors prior to 1972, three other sources of "income": earned, indirect, and unexpended balances from the previous year. The totals therefore exceed, by these amounts, the annual funding requested from the CG. The totals exclude working capital and funds received and spent on special projects. The capital expenditures are generally for buildings and equipment; land is usually provided free by the host government.
- 2/ Grants received for capital and operating costs; not actual expenditures.
- 3/ An International Center for Corn and Wheat Improvement was first formed in cooperation with the Mexican government in late 1963 but was then reorganized and reestablished on an international basis as CIMMYT in 1966.
- 4/ Funds granted by the Ford Foundation. In addition \$106.7 thousand was provided by the Rockefeller Foundation from 1966 to 1968. Except for some site development from the end of 1966 until early in 1968, the project was in suspension due to the civil war.
- 5/ Does not include facilities valued at about \$600,000 provided by the Peruvian government.
- 6/ <sup>will</sup>~~May~~ be increased substantially following wage adjustment.

Sources:

- 1959-1964 (IRRI). Letter from Faustino M. Salacup, Executive Officer and Treasurer, IRRI, August 28, 1974.
- 1965-1969 (IRRI). Werner Kiene, Ford Foundation, August 1974.
- 1966-1971 (CIMMYT). This is CIMMYT, CIMMYT Information Bulletin No. 8, March 1974, Chart 15/2. Table 1 lists donors but really means expenditures (letter from Robert D. Osler, Deputy Director General and Treasurer, CIMMYT, September 11, 1974).
- 1965-1970 (IITA). Letters from H.R. Albrecht, Director General. IITA, August 26, October 26, 1974.
- 1968-1971 (CIAT). Letter from Andrew V. Urquhart, Controller, CIAT, August 29, 1974.
- 1970-1975 (Except CIMMYT and CIAT, 1970, 1971). Budget submissions or presentations for each center for 1974 and 1975, Table III. Estimates for 1975 for CIAT and ICRISAT modified on the basis of comments from Urquhart, op. cit., October 22, 1974, and Ralph Cummings, Director, ICRISAT, September 14, 1974. CIMMYT and CIP figures include allowance for recent earthquake and flood damage.

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523

ASSISTANT  
ADMINISTRATOR

May 15, 1974

Mr. Harold Graves  
Executive Secretary  
Consultative Group on International  
Agriculture Research  
IBRD  
1818 H Street, N. W.  
Washington, D. C. 20433

Dear Harold:

Thank you for your letter enclosing the sheet showing allocations from Consultative Group members to international agricultural research programs in calendar year 1974.

With a few exceptions data shown on your enclosed sheet as grants by AID are correct. The exceptions are: \$100,000 to ILRAD instead of \$330,000, and \$108,000 to WARDA instead of \$110,000. I understand that AID has \$242,000 to apportion between ILRAD and ILCA.

Upon Dr. Guy Baird's return early next week he will discuss with you the apportionment.

Sincerely,

/s/

Joel Bernstein



CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address - INTBAFRAD

*Action  
Baird*

May 6, 1974

*Copy  
JB  
Keller*

Dear Joel:

Here is a sheet showing allocations from Consultative Group members to international agricultural research programs in the calendar year 1974. Could you have this examined and then inform me whether it is correct in so far as AID grants are concerned? We would like to have this information soon, so that we can proceed with the second tranche of grants from IDA in the light of the allocations already made by AID and other donors.

Sincerely yours,

*Harold Graves*  
Harold Graves

Enclosure

Dr. Joel Bernstein  
Assistant Administrator  
Technical Assistance Bureau  
United States Agency for  
International Development  
320-21st Street, N. W.  
Washington, D. C. 20523



	<u>Total</u>	<u>CIAT</u>	<u>CIMMYT</u>	<u>CIP</u>	<u>ICRISAT</u>	<u>IITA</u>	<u>IRRI</u>	<u>ILRAD</u>	<u>ILCA</u>	<u>Genes</u>	<u>WARDA</u>	<u>Unallocated</u>
Australia	.100						.100					
Belgium	.390					.310			.025		.045	.010
Canada	4.685	.755	.550	.320	1.805 <sup>a/</sup>	.755		.400			.100	
Denmark	.370		.150	.200					.020			
Ford	3.000	.750	.750			.750	.750					
France	.125								.100		.025	
Germany	2.845		.345 <sup>b/</sup>	.135 <sup>c/</sup>	.435	.655		.365	.365	.035		.510
IDB	2.000	1.000	.750	.250								
IDRC	.930		.050		.275		.355	.100	.150			
Japan	.270						.270					
Kellogg	.280	.280										
Netherlands	.605	.125		.180		.125		.050		.050	.075	
Norway	.430				.190							.240
Rockefeller	3.100	.750	.750	.150		.550	.700	.100		.100		
Sweden	1.625			.215	1.220				.105	.085		
Switzerland	.290	.070		.070	.150							
U. K.	2.015	.055	.005	.110	.400	.570	.430	.230	.090	.055	.015	.055
UNDP	1.450		.700		.650			.050	.050			
U. S.	7.000	.950	1.350	.550	1.000	1.500	1.100	.330	.100		.110	.010
World Bank	<u>3.200</u>	<u>.275</u>	<u>.200</u>			<u>.250</u>	<u>.580</u>				<u>.095</u>	<u>1.800</u>
Available	34.710	5.010	5.600	2.180	6.125	5.465 <sup>d/</sup>	4.285	1.625	1.005	.325	.465	
Required		5.310	5.600 <sup>e/</sup>	2.245	5.600	6.325 <sup>d/</sup>	4.825 <sup>f/</sup>	1.625	1.005	.325		
Net		-.300 <sup>10<sup>00</sup></sup>	-	-.065	+0.525	-.860	-.540	-	-	-		

will list around with kcal

a/ Includes \$800,000 available in 1973.

b/ Includes \$160,000 made available in 1973.

c/ Bilateral funds applicable to core program.

d/ Not taking account of carryover from 1973 and 1973 funds not delivered until 1974.

e/ See also Mr. Hanson's letters of January 11 and February 4, 1974.

f/ Adjusted in response to Dr. Brady's cable of April 29, 1974.

May 3, 1974

Currency values as of  
January 2, 1974

STATE - A.I.D. - USIA ROUTING SLIP				DATE 5/21		
TO:	Name or Title	Orgn. Symbol	Room No.	Bldg.	Initials	Date
1.	<del>Woodrow Locke</del>	<del>AFR/NARA</del>	<del>4749</del>	<del>U.S.</del>		
2.		Mr Allen				
3.		Mr Kraus				
4.						
5.						
Approval		For Your Information		Note and Return		
As Requested		Initial for Clearance		X Per Conversation		
Comment		Investigate		Prepare Reply		
File		Justify		See Me		
For Correction		Necessary Action		Signature		
REMARKS OR ADDITIONAL ROUTING						
<p>As mentioned by telephone, Harold Graves feels that no further funding of ILCA is needed for CY 79, but that the \$ 242,000 can be used effectively by ILRAD - without that additional contribution resulting in any increase in our 25% volume. See attached table which shows ILRAD contribution in 1974 at \$1.625 million.</p> <p>If you agree to put the \$242,000 in ILRAD, we will proceed with the paper work.</p>						
FROM: (Name and Org. Symbol)				ROOM NO. & BLDG.		PHONE NO.
S. B. David						

STATE - A.I.D. - USIA		DATE	
ROUTING SLIP		5/24/74	
TO:	Name or Title	Urgen. Symbol	Room No. Bldg.
1.	<del>W W Leake</del>		
2.	<del>Dr J. Baird</del>		
3.	TA/AGIR 2745		
4.	File - CG/AR (1974)		
5.			

Approval	For Your Information	Note and Return
As Requested	Initial for Clearance	Per Conversation
Comment	Investigate	Prepare Reply
File	Justify	See Me
For Correction	Necessary Action	Signature

REMARKS OR ADDITIONAL ROUTING

Our original discussion with Harold Brown was for \$200,000 to ILRAD for commodities and \$42,000 to ILCA. Brown never heard ILCA does not require more funds (Agreement with Ethiopia still not signed) so agree to use of \$42,000 for ILRAD.

Concur *eeBreen*  
*Grass*  
*Gr Leake*

FROM: (Name and Org. Symbol)	ROOM NO. & BLDG.	PHONE NO.
AFR/MARA		



File - International Centers - 1974  
CG Manual 74

March 13, 1974

MAR 14 1974

*W*  
*Baird*  
*2245*

INFORMAL COVER NOTE TO THE ADMINISTRATOR

SUBJECT: International Agricultural Research Centers

I'm attaching two memoranda, concerning the Centers, that deal with two particular interests that you have expressed. They are both background briefing, to be read whenever you feel able.

The first responds to the interest you have expressed in broadening the scope of Center activities beyond development of technologies into concerns with improving the economic and social impacts of farming systems. It summarizes the current status of this dimension of Center work and some TAB views on the subject.

The second is an AID statement to the Consultative Group, one of a series of Agency efforts to encourage the development of a particular Center's work along systems lines. The first three pages are all that's relevant here. AID persistence in the case in question has been a major factor causing this newest Center, for livestock production in Africa, to be given a mandate to develop its work more or less along the systems lines described in the attached statement. Organization of this new Center is just beginning.

*J*  
AA/TA, Joel Bernstein


Attachments



March 13, 1974

INFORMATION MEMORANDUM FOR THE ADMINISTRATOR

THRU: EXSEC

FROM: AA/TA, Joel Bernstein 

SUBJECT: Role of International Agricultural Research Centers in Promoting Optimum Economic and Social Results from New Agricultural Technologies

Responding to some questions you have raised on the above subject, this memo summarizes for you its current status and some TAB thinking about it.

Desirable Center Activities

We believe that there are a number of ways that the Centers can and should go beyond mere creation of high-yield technologies to concern themselves with improving the economic and social impacts of their work.

(1) They can concentrate their attention on those crops that are most important for the mass of poor growers and poor consumers in the LDCs, and avoid diversion of effort in other directions. Of all their program choices, this may be the most significant in affecting LDC income distribution. They have done well in this regard. Pressures to do otherwise have been resisted.

(2) They can focus on the total farming systems of typical small farmers, and not just on individual crops, which requires attention both to the technical interactions of various parts of the system and to their interaction with the governing economics and social factors in the village. This permits more realistic attention to the feasibility and net costs and benefits of farmer adoption of new technologies. It permits the problems and opportunities of technology change to be examined from the farmer's point of view. There now is a strong trend in Center work in this direction, but it needs to go considerably further and the practical results are only beginning. Establishment of small social science units (mostly economists) at the Centers is helping. They will need some further strengthening.

(3) Closely related to the foregoing, the Centers can apply combined techno/socio/economic analysis to identify characteristics of plants and farming systems that, if attainable, would be most likely to combine high output with large net benefit to the mass of farmers (typically small and poor), and then program their research to seek those characteristics.

For example:

- . the most important and prevalent concern of small farmers is to minimize risk, as they are in a poor position to accept high risk in individual years as a trade-off for high average gain over a number of years; (Thus, they need technologies requiring minimum risking of capital and minimum risk of crop failure due to environmental stresses)
- . the collective effect on employment and income distribution, in the village, is particularly important in relation to landless poor; (Fortunately, desires for labor intensity and low capital inputs are often complementary--both being accentuated recently by rising energy costs.)
- . as higher yields make small farmers more dependent on sale of surpluses, attention must be given to the effect of plant characteristics and farming systems on the costs and benefits from processing and marketing; i.e., Center research needs to consider the requirements of processors, marketers and consumers.)

The Centers' attention thus far to this range of considerations is spotty--very strong on some points, such as risk, in parts of their work and little consideration in other cases. Recognition of the need to do more has improved substantially over the past year or two--aided by a special seminar last summer, under Consultative Group auspices, on how to strengthen the contribution of socio-economic analysis to the impact of the Centers' technical work. We believe that there will be further improvement, particularly if the donors and LDCs continue to show interest.

(4) The Centers can also give priority to research that has the greatest potential for improving the nutritional benefit of crops grown. They have already done this to a considerable extent. AID made suggestions last year for further strengthening of this aspect of the Centers' work, and these are being considered.

(5) The Centers can help identify factors that are impeding the farmer's application of available technologies and provide feedback in two directions: to national authorities for corrective action where called for and feasible, or back to themselves where further research is needed to deal with the impediments. This has been one of the strongest areas of the Centers' socio-economic research thus far, though the total of such research is still comparatively small.

(6) The most important Center effort to further utilization of better farming technologies, is to help build the capabilities of the institutions in the individual LDCs that provide the linkage to farmers. This is called "outreach" in the jargon of the Centers, and is being given great stress. AID has pushed this work component since our support began. It involves



joint research with LDCs, on-the-job type training, advisory services in the LDCs, and information services. The Centers' help is and should be focussed primarily on the LDCs' adaptive research capabilities, for two reasons. The current weakness of these capabilities is probably the greatest of the various impediments to the transfer of worldwide technological advances to farmers in particular LDCs. (There is some interesting empirical evidence on this.) Also, this task is one the Centers are very well qualified to accomplish. Some of the Agencies supporting the Centers are meeting next week at Bellagio to consider how best to strengthen LDC national research capabilities. The Centers are doing some practical type training of national extension service leaders in on-farm application of new technologies incorporating work done at the Centers, and some advising in LDCs on crop production campaigns. These "outreach" activities can and will be expanded, as the Centers' facilities and staffing grow. They are an important part of the building of global problem solving "networks" that we have been encouraging and supporting.

(7) The Centers can help to interpret the policy implications of their work to LDC policy analysts and decision makers, so as to facilitate follow-up that will bring the best development results.

There may well be other feasible and desirable Center activities that could improve the economic and social impact of the Centers' work.

#### Limits to What Centers Should Do

As a practical matter, we must recognize that there are serious problems in trying to do too much at the Centers--more than they can manage well. The classical error of reaching for too much and losing what you have must be avoided. The Centers are primarily technical research institutions, of outstanding quality. This shapes the character of their staffing, management and scope of excellence. Experience does suggest that there are certain types of socio-economic research that are essential to get widely beneficial application of the Centers' technical research results and that are best done through close collaboration between biological and social scientists. These are noted in the list above. At the same time, unless the Centers can continue to produce major technical breakthroughs, which requires concentrated effort, multiplication of their "outreach" and socio-economic research won't do much good. Consequently, the Centers should avoid taking on types of work that can be done as well or better somewhere else. For example:

(1) Taking on responsibility for actually extending new knowledge to LDC farmers or trying to build extension systems would swamp the Centers, and they are not specially qualified for such work. Providing limited amounts of the training and advisory services noted under point (6) above is about as far as they can and should go, e.g., they train trainers or



managers of extension trainers and managers for the individual LDCs. More technical assistance of this type can be done under other auspices, drawing on developed country expertise and on the special knowledge at the Centers as needed. We have been pushing within AID, with other donors and with LDCs for more such work.

(2) So-called macro-analysis of national and international demand and supply conditions for various commodities, agricultural sector analysis for individual LDCs, derived policy analyses, and other such work requires sizeable resources and special expertise of its own. This can be done better outside the Centers. We are currently considering some initiatives to strengthen LDC capabilities in these important areas.

(3) The requirements for farm level analysis in LDCs, in order to devise improved systems and results, is vast and tends to be location specific. Thus the Centers are not suited to meet any sizeable part of the need. They should do some highly selective analyses, along lines suggested under points (3) and (5) above and be careful not to get drawn further. The seminar last summer suggested that the best way for them to proceed is to organize networks of social science researchers, from the individual LDCs faced with a common problem (e.g., farm level obstacles to adoption of high yielding rice varieties), and to coordinate action on an agreed joint research program, working with biological scientists and others as suitable. This would also provide valuable training to build LDC capabilities. Several of the Centers are pursuing this course, within their limited staff capabilities, with encouragement from us and some other Consultative Group members.

(4) Another important need, best met elsewhere, is analysis and technical assistance on the organization and management of operational flows throughout the various agricultural commodity systems. This is the kind of work on which our Office of Development Administration is concentrating.

#### U.S. Influence

Having suggested some "do's" and "don'ts" for the Centers, the question is how to influence their actual work. Over the past four years, AID has supported strengthening of each of the types of work on the above "do" list, through direct contacts with Centers and via the Consultative Group apparatus. This has had considerable influence. Other donors too have given strong support and encouragement to this same range of efforts, particularly the Ford and Rockefeller Foundations and the Canadians. More recently, several of the international organization members of the Consultative Group are doing the same. As a result of all this and their own experience, the Centers have evolved from an initial focus that was almost entirely technical to programs that do concern themselves very substantially with economic and social impacts in the LDCs.



In continuing efforts to encourage further strengthening of this dimension of Center programs, AID must act within the constraints of the International Centers' system. Two great strengths of this system are (a) the autonomy of the Center governing authorities from any national influences, which has permitted the concentration of outstanding professional talent and programs free of political constraints, and the gaining of international confidence and support, and (b) the Consultative Group structure, which has permitted mobilization of wide financial support for the Centers plus collective means to monitor Center activities and assure effective use of funds provided on behalf of all the donors. This collective approach is needed to preserve the management authority and responsibility of the Center Boards of Trustees and Directors and their protection from the diverse pulls of multi-national interests. AID made its original commitments to the Centers because of the confidence engendered by factor (a) and the demonstrated capabilities of this type of institution, coupled with the professional support of the Rockefeller and Ford Foundations. Factor (b), aided by factor (a) and the conditional 25% AID commitment to Center budgets has caused non-U.S. financing for the Centers regular budgets to rise from \$.9 million in 1970, mostly from Canada, to \$19.4 million in 1974 from 15 non-American donors.

Thus AID must exercise persuasion and bring Center managements and other donors along with our views in order to induce change, and we must also be responsive to their views. Because of the size of our support and our various working linkages with the Centers, we have substantial informal influence. Avoidance of unilateral demands has helped this. In the case of the widening of the socio-economic perspectives of the Centers, there remains much uncertainty and much to be learned all around about the feasible and desirable scope of Center activities, considering all of the trade-offs that are involved. Thus we need to direct our influence with some caution, and with care not to damage those distinctive qualities of the Centers that have made them such a strong positive force.

Comments by Joel Bernstein on African Livestock Research

Mr. Chairman, there is a certain dilemma presented by the combination of three conclusions reflected in the papers before us on the proposed African Livestock Center, and in the further explanations by Sir John.\*

- We have learned that, over the course of the two TAC meetings, there developed a consensus of most members that significant progress on African livestock problems does require a broad program approach covering the principal factors affecting the whole livestock system, as the Task Force in animal production and health in Africa had indicated. This same conclusion has been reached on a number of other occasions, including a February 1970 international conference at Bellagio on developing country agricultural research priorities and some subsequent special panel discussions among agricultural and livestock people.
- However, the TAC feels that it does not yet have adequate information or adequately worked out proposals on how to structure and locate the production components of an overall livestock center, or on how to relate such components to other research entities and programs in Africa. Thus the TAC has indicated a need for additional study and work on the proposals before it can make a definitive recommendation on how to proceed with the production component of an African livestock center.
- However, the TAC did feel that it had an adequate basis for recommending, as it did, that efforts proceed to establish a major disease component of an African livestock effort, viz., the proposed East African animal disease laboratory.

The problem is how to develop the most constructive course of action to reconcile these three conclusions. This presents a dilemma because of the need to proceed from the beginning of any concerted international effort in this field in the framework of an African Livestock Center concept that is broad enough to cover all of the major components of the actual livestock systems--breeding, forage, water supply, production management, diseases, regulation and legal factors, the many components of the marketing sub-systems, and so forth. We are concerned that donor efforts not be wasted through failure to implement this approach.

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\* Chairman of the Technical Advisory Committee to the Consultative Group (TAC), which recommends research support priorities and new Center programs to the Consultative Group for its support, and monitors on-going programs for the CG.



Our concern arises from recognition that the central purpose of development assistance is sizeable improvement in the lives of developing country peoples and that, in the case of any new livestock ventures in Africa, this goal translates into sizeable increases in meat actually consumed and widespread income increases by those engaged in production and marketing of meat. To achieve these purposes requires basic changes in the total systems of human effort that create meat and move it into people's mouths--changes that are not likely to be accelerated much without the kind of program organization that can produce a potent vertical systems approach to the prevailing problems.

What we mean by a vertical systems approach is one that:

- establishes clear and meaningful basic purposes--along the lines already suggested--and realistic intermediate goals that research and development will try to attain, based on realistic assumptions about other significant factors affecting the basic purposes;
- identifies clearly the key elements in the total systems of human effort involved with livestock production and marketing;
- identifies where the most immediate bottlenecks really are to achievement of the program goals, i.e., where would a concentration of the necessarily limited external assistance produce the greatest progress towards the goals;
- organizes an integrated, interdisciplinary attack on the sets of problems identified with the most important bottlenecks, with appropriate interrelating of the various strands of effort;
- tries out and demonstrates the effectiveness of new combinations of technology and practices at significant points in the vertical chain of action from meat production to consumption.
- extends its knowledge in ways best calculated to assure widespread applications.

There needs to be a "nerve center" where the system analyses can occur and where the scarce resources needed for the most sophisticated types of interdisciplinary teamwork and testing of findings can be concentrated. Such a center could also facilitate exchanges of knowledge, experience and ideas between itself and national centers and among national centers, and could provide valuable training and guidance in output oriented research for Africans--in other words, it could further the "network" concept that was stressed in the original statements of CG and TAC purposes as the way to assure strengthening of research in individual developing countries and complementarity of their work and that of the international research centers.



This concern that the approach to an African livestock center start from the beginning in a broad system context is not theoretical. It reflects hard experience. There have been many livestock research and development efforts scattered in bits and pieces all over Africa--dealing with various aspects of breeding, forage, water, disease, slaughtering, etc. Much of this work has no doubt been very creditable, within its limited terms of reference. But the attainment of significant results in increasing meat actually consumed and incomes generated has tended to be frustrated by inability to coordinate the various elements of research and development in major attacks on the actual bottlenecks in the vertical livestock systems.

While there can be valuable contributions from new methods of controlling particular animal diseases, it could be wasteful for this work to get too far ahead of improvement in other factors in the livestock systems that need change before improved disease control can affect the basic purposes. If particular kinds of disease work get too far ahead, investment in this work has been wasteful in the same sense that investment in a bridge is wasteful when it is finished well before connecting roads are in place. Moreover, it is likely to be very difficult to patch together various disease and production oriented efforts within a single broad institution and program once the disease program proposed for East Africa has a life of its own with associated vested interests. Having said this, we would not like to see worthwhile elements of the overall effort to improve African livestock systems held back if they are ready to move ahead, as long as this can be reconciled with the need to assure the kind of broad approach I've been describing.

Mr. Chairman, it seems to us that there is an approach that could reconcile the various needs that I've described and that could bring constructive progress on the question before us, consistent with the TAC recommendations. This could result from a CG consensus on the following three points.

(1) Agreement in principle on the need for an approach to development of an African livestock center that envisages an institution whose R&D scope covers the overall improvement of African livestock systems. Such a center might include installations in several African countries that would focus on selected elements of the overall livestock systems of Africa, but it should have from the beginning a single widely based Board and a single Director to assure a well integrated approach to the complex set of factors involved in increasing substantially the contribution made by livestock production to the well being of the African peoples.

(2) CG Chairman should be requested to convene an early meeting of potential donors and those interested organizations with large current investments in African livestock research to confer and seek a consensus on how to proceed in general and to begin to discuss such questions as

the kind of Board membership desired, nominees, how the Director should be selected and who might be nominated to the Board, etc.--and also to indicate the likely extent of their future financial support.

- . One advantage of this step is that it's the most practical way to provide part of the advice the TAC report says it needs to make further recommendations, viz. advice re what "financial facilities are currently available or likely to be available".
- . Moreover, presuming that the bulk of the Board including the Chairman should be able Africans of recognized stature and widely representative, the early activation of a broadly based Board will give a strong role for African leadership in the subsequent shaping process for the different elements of the livestock program.
- . This step would also mean that, to the extent that donors are interested, they could consider the provision of initial funding that would (a) permit proceeding with definite steps to establish the East Africa disease laboratory, on the basis of the TAC recommendations and assuming that this action is ready to go, and (b) also provide some funding for further planning and studies and consultations, as needed, to reach a satisfactory basis for proceeding subsequently with the production elements of the overall livestock center.

(3) Acceptance by the CG of the TAC recommendation for the preparation of a more complete and fully documented report for future consideration by TAC, particularly in respect to the effectiveness of current research on animal production and health in Africa and the role that existing facilities (suitably strengthened if necessary) might play in an overall research network for which the proposed International Center might provide the focal point. The group convened under point (2) should consider, in consultation with the Chairman of TAC, the organization and financing of a team to prepare this report, for which the TAC should prepare terms of reference. The team should build on the information already available from prior studies and should start by collecting and evaluating information available from existing organizations with wide experience in problems in livestock development in Africa--completing its work within six months.

December 3, 1971



→ File

CGIAR - IDB

ANTICIPATED AVAILABILITY OF NATIONAL CURRENCIES OF  
COLOMBIA, MEXICO AND PERU IN THE SOCIAL PROGRESS  
TRUST FUND (SPTF)

Following is an estimate of availabilities of national currencies  
of Colombia, Mexico and Peru in the SPTF for 1975 net of FSO participations,  
technical assistance expense and disbursements to date:

(Equivalent of thousands of US dollars)

	<u>Colombia</u>	<u>Mexico</u>	<u>Peru</u>
Available on March 31, 1974	\$ 819	\$ 278	\$ 429
Loan recuperations in second half of 1974	779	691	2.336
Loan recuperations in 1975	<u>2.799</u>	<u>1.750</u>	<u>2.864</u>
Total <sup>1/</sup>	<u>\$4.397</u>	<u>\$2.719</u>	<u>\$5.629</u>

<sup>1/</sup> During the last three quarters of 1974, there may be commitments against  
these available currencies either because of purchase of FSO participa-  
tions or their use for technical assistance. Loan recuperations pro-  
grammed for 1975 should be more than adequate to finance contributions  
to the international centers for that year. If they are not FSO  
participations held by the SPTF could be reversed to the extent nec-  
essary. As of March 31, 1974, SPTF participations in the FSO in na-  
tional currencies were the following:

Equivalent of thousands of US dollars

Colombia	\$ 17.845
Mexico	9.769
Peru	14.228

IDB to express intent to contribute \$4 for 3 centers in 1975

Memo -

1. Increase resources to meet gap
2. Increase use of SPTF resources for a very small white cross -  
mission LA <sup>with</sup> involvement in support of 1 center



PROPOSED BUDGETS AND ESTIMATES OF 1975 PLEDGES TO  
WESTERN HEMISPHERE INTERNATIONAL AGRICULTURAL RESEARCH CENTERS

(In millions of U.S. dollar equivalent)

	<u>BUDGETS</u>		
	<u>CIAT</u>	<u>CIMMYT</u> <sup>1/</sup>	<u>IBR</u>
Core	5.2	6.4	2.2
Capital	<u>0.8</u>	<u>0.3</u>	<u>0.2</u>
Total	6.0	6.7	2.4
<u>PLEDGES</u>			
Canada	0.755	0.550	0.320
Ford Foundation	0.750	0.750	-
Kellogg Foundation	0.280	-	-
Rockefeller Foundation	0.750	0.750	0.125
Switzerland	0.090	-	0.090
United Kingdom	0.250	0.010	0.125
IBRD	0.600	0.500	0.065
Germany	-	0.250	0.250
IDRC	-	0.050	-
UNDP	-	0.700	-
Denmark	-	-	0.175
Sweden	<u>-</u>	<u>-</u>	<u>0.250</u>
Sub Total	3.475	3.560	1.400
Deficit	2.525	3.140	1.000
U.S.A. (?)			
IDB (?)			

<sup>1/</sup> This budget is approximately 0.5 less than requested because of reduced inflation estimates made by the Secretariat of the Consultative Group.

February 25, 1974

Ms. Marjorie Belcher  
Deputy Director  
USAID/Ankara

Dear Ms. Belcher:

Telegram Ankara to AID/W (00766) dealt with needs for information on other multilateral and bilateral donor programs affecting Turkey. I am responding to the part of the telegram concerning the Consultative Group on International Agricultural Research (CGIAR). The last meeting of CGIAR was held last November and a copy of an Information Memorandum on it is enclosed. If you wish further details on any of the items discussed, I shall be glad to try to provide them.

Perhaps you would be interested in knowing that serious consideration is being given by the Technical Advisory Committee (TAC) of the CGIAR to establishment of an international research center for the Mid-East and North Africa. As now conceived, it would be established along the lines of CIMMYT. It would have major responsibility for barley, lentils and broadbeans; would have strong relay links with CIMMYT in wheat; would concentrate on soil and water management; and would have a program on livestock -- primarily sheep. We should have more definite information about this matter when CGIAR meets again this summer.

Sincerely yours,

Guy B. Baird  
Associate Director (Research)  
Office of Agriculture  
Technical Assistance Bureau

Enclosures  
a/s

cc: ASIA/NE/T, CBuck

TA/AGR/GBBaird/sad/2-25-74

Shiley -

Please get out  
a copy of our  
rept cover the Nov 73  
CGIAR meeting. Make  
3 copies.

SMW 2/13



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REMARKS OR ADDITIONAL ROUTING						
<p>Enclosure: (TO AID) 00766          USAID Needs for Timor          Information - for          response re Paragraph 4,          as discussed.</p> <p>Thank you for your          assistance on this          matter, Mike.</p>						
FROM: (Name and Org. Symbol)			ROOM NO. & BLDG.		PHONE NO.	
James Gallivan			6486 NS		28608	

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REMARKS OR ADDITIONAL ROUTING						
<p>Key: Please see para 4  page 2. +: Research Network  and Consultative Group  I would suggest sending  copy of your report. minutes  of meeting etc to Luky:  1 letter to Mrs. Margorie Belcher  forwarding info. with copy  to Desk.  Mike</p>						
FROM: (Name and Org. Symbol)			ROOM NO. & BLDG.		PHONE NO.	
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Department of State

TELEGRAM

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PAGE 01 ANKARA 00766 311510Z

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ACTION AID-59

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TO SECSTATE WASHDC 2612

UNCLAS ANKARA 00766

AIDAC  
E.O. 11652: N/A  
SUBJ: AID NEEDS FOR OTHER DONOR INFORMATION

REF: AIDTO CIRC A-6

1. USAID OBTAINS MOST OF ITS INFORMATION ABOUT OTHER MULTILATERAL OR BILATERAL DONOR PROGRAMS IN ANKARA. PERIODIC INFORMAL MEETINGS OF DONORS KEEP US RELATIVELY WELL INFORMED. THEY ARE SUPPLEMENTED BY DISCUSSIONS OF SPECIFIC AREAS, PROJECTS AND PLANS AS APPROPRIATE. THE OECD TURKEY CONSORTIUM MEETINGS, PARTICULARLY THOSE AT WHICH PLEDGES ARE MADE OR SOLICITED PROVIDE INFORMATION ABOUT LEVELS AND

GENERAL PURPOSES OF OTHER DONOR CAPITAL ASSISTANCE. IN GENERAL WE FEEL THAT WE ARE RELATIVELY WELL INFORMED ABOUT OTHER DONOR ACTIVITIES.

2. WE ARE PERHAPS LESS WELL INFORMED ABOUT IBRD LOANS THAN ABOUT OTHER PROGRAMS. THIS RESULTS FROM THE ABSENCE (BY DECISION OF THE TURKISH GOVERNMENT) OF A PERMANENT IBRD REPRESENTATIVE IN TURKEY. VISITING IBRD MISSIONS USUALLY CALL ON USAID BOTH AS A SOURCE OF INFORMATION AND TO KEEP US INFORMED OF THEIR ACTIVITIES. THUS DEVELOPMENT OF NEW LOANS IS USUALLY KNOWN ABOUT. IT IS HARDER TO KEEP INFORMED ABOUT PROGRESS IN LOAN IMPLEMENTATION. THE \$13 MILLION EDUCATION LOAN IS A CASE IN POINT -- WHILE WE ARE ALERT FOR INFORMATION

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Department of State

**TELEGRAM**

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PAGE 02 ANKARA 00766 311510Z

FROM MINISTRY OF EDUCATION AND OTHERS, WE FREQUENTLY ARE NOT KEPT CURRENT WITH CHANGING PLANS AND SCHEDULES FOR IMPLEMENTATION OF THIS LOAN. OUR MAIN SOURCE OF INFORMATION REGARDING THE MANAGEMENT TRAINING ELEMENT OF IT IS THE FORD FOUNDATION CONSULTANT WHO WAS ALSO THE IBRD CONSULTANT AT THE TIME THE LOAN WAS MADE.

3. AID/W REPORTING OF MEETINGS WITH OTHER DONORS AT WHICH TURKEY IS DISCUSSED IS ALSO HELPFUL.

4. AS INDICATED IN OUR MESSAGE ON THE UNDP LAST SUMMER (TOAID A181) IT IS GENERALLY MORE DIFFICULT TO KEEP IN TOUCH WITH REGIONAL AND GLOBAL ACTIVITIES OF OTHER DONORS WHICH AFFECT TURKEY. SPECIFICALLY, WE WOULD WELCOME MORE INFORMATION ABOUT DISCUSSIONS AND DECISIONS OF THE CONSULTATIVE GROUP ON AG RESEARCH NETWORKS.  
MACOMBER

UNCLASSIFIED

TA/AGR, Mr. James A. Urano  
Dr. Lee Fletcher

January 14, 1974

TA/AGR, Guy B. Baird *GB*

Aquaculture Meeting in Office of Bernstein January 10, 1974

As I understand it, we were asked to do the following:

A. Collection and collation of information (TA/AGR-URANO)

1. Information on existing techniques as well as on those that are coming forward. Include statements on potential payoffs as well as identification of important (or possibly important) limiting factors (e.g., diseases, water quality).

2. Information on R&D activities.

B. Socio-Economic Analysis (TA/AGR-FLETCHER) with special help

1. Determine the potential comparative importance of various technological advances (actual or potential) -- investment by AID in time and money against impact on world nutrition needs with particular reference to the LDCs.

2. Identification of important factors in the socio-economic analysis.

C. Conclusions

1. What do we think the development community should be doing about aquaculture? How much more emphasis and of what kind? What research is needed?

2. What should be the role of AID?

It was noted that TA/N should be consulted in the development of the information and the paper.

With reference to "B" above, a period of 3-4 months was considered reasonable in which to complete the analysis. By implication, the overall paper should be ready shortly after the completion of "B".

As relevant documentation, I am attaching a copy of the "Report of the TAC Working Group on Aquaculture."

cc: TA/AGR, OJKelley

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REMARKS OR ADDITIONAL ROUTING					
<p>I believe you will find the attached paper on "The 'Green Revolution' in Recent Development Experience" interesting. Evenson prepared a paper last year for the CGIAR on investment in aquacultural research. Particular attention is called to pages 15-18.</p> <p style="text-align: center; font-size: 1.5em;"><i>Enclosed 3 copies</i></p>					
FROM: (Name and Org. Symbol)			ROOM NO. & BLDG.		PHONE NO.
<i>Guy S. Paul</i>					



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✓ Dana C. Dalrymple

USDA/ERS, Lyle Schertz

State/IO/AGR, John L. Mills

Treasury, Ernest F. Chase

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FROM: (Name and Org. Symbol) <i>TA/AGR, Guy B. Baird</i>			ROOM NO. & BLDG. <i>2243 NS</i>		PHONE NO. <i>27921</i>	

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## THE "GREEN REVOLUTION" IN RECENT DEVELOPMENT EXPERIENCE

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The term "green revolution" is now familiar to everyone with more than a passing interest in economic development. The "Mexican" wheat varieties and the "IRRI" rice varieties were accorded miracle status by the media as they were rapidly adopted in a number of Asian and African countries after 1965. Their initial promise sparked food self-sufficiency drives in several countries. By 1970, the adoption of these improved, high yielding varieties was credited with providing a realistic basis for sustained productivity gains in LDC agriculture. That promise has turned out to be short-lived, however. The optimism that existed three years ago has all but vanished. The adoption of high yielding varieties has fallen short of expectations and the abnormally poor weather of the past two years has produced serious food shortages throughout the world.

The green revolution "episode" has been subject to numerous evaluations (Willet [1969], Barker [1972]). Most prior evaluations have made comparative assessments of production and resource utilization between "high yielding" rice or wheat varietal technology and local or native varietal technology. Dozens of studies have reported very significant cost advantages for the high yielding varietal technology. These studies, however, are all quite local in nature, and in almost all cases, are based on farm data from regions of early adoption of the high yielding varieties. They cannot be used to assess the relative advantage of high yielding varieties over the entire

rice or wheat producing regions of the countries where they have been adopted.

This paper develops a methodology for assessing the relative advantage of the high yielding varieties in large producing regions and reports estimates of their contribution to aggregate production in Asia and North Africa. A simple specification based on the supposition that real productivity gains in the region were exclusively associated with the adoption of high yielding varieties is first developed. It is rejected in favor of a somewhat richer specification which explicitly considers the contribution of indigenous or national agricultural research activities to productivity gains.

#### The Setting for the Green Revolution Episode

A brief review of the historical and institutional setting in which the rapid and geographically widespread diffusion of a few wheat and rice varieties took place will be useful. We will not dwell specifically on the discovery of those varieties. That "story" has been told and retold in many places. Serious scholars know that the discovery of the improved wheats was the culmination of years of dedicated and competent effort by a number of agricultural scientists. The scientific knowledge which provided the foundation for these discoveries had been developed over many years. Similarly, the new rices were developed from a scientific base, years in the making. The discoveries themselves were not mysterious, not miraculous, and for that matter, not really extraordinary.<sup>1</sup>

What was extraordinary about the episode was that very little organized discovery activity directed toward the discovery of improved varieties of foodgrains in the tropical and sub-tropical climate zones was being



undertaken in the 1950s. As a consequence, the discoveries, particularly the wheat varieties from the Rockefeller Foundation program in Mexico, were diffused over very wide geographic areas. Such widespread diffusion would have been very unlikely in the temperate and steppe climate zones where dozens of first-rate discovery institutions have been in place for a number of years. The existence of a reasonably efficiently organized system of discovery institutions, in which each major research center is oriented toward the discovery of technology suited to the soil, climate and economic characteristics facing its clientele, effectively prevents widespread direct diffusion of technology. Green revolutions, in the popular sense of the term, would not occur in a modern system of scientific and technology discovery institutions.

The poorly organized and understaffed research systems of almost the entire less developed world in the 1950s did provide the ideal setting for a green revolution, just as the organization/ (or lack of it) of sugarcane research in the 1920s and 1930s led to the widespread diffusion of the Indian and Javanese interspecific sugarcane hybrids of that period.<sup>2</sup> Green revolutions, while of great importance, do provide strong evidence that serious underinvestment in regional location-specific technology discovery prevails. Even under conditions in which relatively little competing discovery is being undertaken, however, soil and climate factors will limit the geographic scope of the superiority of new varieties.

### The Simple Aggregate Evidence

The estimation of the contribution of the green revolution high yielding varieties could, with adequate data, be undertaken on a country-by-country basis. A productivity relationship might be specified in which changes in wheat and rice output are related to changes in the utilization of land, fertilizer, irrigation, other agricultural inputs, and some measure of the new technology introduction, such as the percent of the crop produced from the new varieties. It is, however, a practical impossibility to obtain estimates of the parameters of such a relationship in the face of significant weather induced production variation and with a time series of only 5 or 6 years.

The approach taken here is to forego any attempt at country-by-country analysis and to concentrate on identifying a regional relationship between the adoption of new varieties and production, utilizing cross-section-time series data from several countries. This enterprise is also subject to data limitations, in that it is not possible to obtain aggregate data for all crop specific inputs for the Asian and Middle Eastern countries of concern. It is possible, however, to construct data on land and fertilizer use. Under reasonably plausible conditions, this limited data is sufficient to enable an estimate of the increased production associated with the high yielding varieties.

The basic "model" underlying the econometric specification in this and later sections of the paper is a simple productivity formulation. Suppose that the aggregate production function can be written:

$$(1) \quad Y = f(f_b(X_b, Q_b), f_m(X_m, Q_m))$$

The production function  $f$  is homogeneous of degree one, and is written as a function of two "sub-processes," a biological process,  $f_b$ , and a mechanical process,  $f_m$ . Each process is a function of a vector of inputs  $(X_b, X_m)$  scaled into standard "quality" units by a vector  $(Q_b, Q_m)$ . Sadan [1970] among others, provides some evidence that the elasticity of substitution between the two sets of inputs,  $X_b$  and  $X_m$ , is relatively low even though it may be quite high for different inputs within each process. For example, labor and mechanical equipment are quite substitutable in the  $f_m$  process. Our major interest here is in identifying the relationship between output,  $Y$ , and  $Q_b$ , the quality composition of the biological inputs. The utilization of plants with improved biological properties (from an economic point of view) represents a change in this quality vector.

If we make the assumption that the ratio of mechanical inputs,  $X_m$ , to land has remained unchanged since 1950 (or has changed smoothly over time in later specifications) the following estimable specification of (1) is possible:

$$(2) \quad Y_t/\bar{Y}_{50} = c(L_t/\bar{L}_{50})^{a_1} (F_t/\bar{F}_{50})^{a_2} \text{EXP}^{a_3 \text{HYV} + a_4 (\text{HYV})^2}$$

In (2) cross section-time series data for the post-1950 period on the aggregate production of wheat (rice) relative to the average production in each country in 1948-50 are regressed on land,  $L$ , and fertilizer utilization,  $F_t$  (which is not commodity specific, but is measured as fertilizer per acre in all major crops)<sup>3</sup> in a standard "Cobb-Douglas"



Table 1

Regression Analysis: High Yielding Varieties

Contributions: Simple Model (2)

<u>Independent Variables</u>	<u>Wheat Production</u>	<u>Rice Production</u>
	(13 Asian-Middle Eastern Countries 1948-71) 307 observations	(12 Asian-Middle Eastern Countries 1948-71) 282 observations
LN (Land)	.9836 (.0030)	1.0374 (.0030)
LN (fert)	.0411 (.0058)	.0477 (.0021)
HYV	.0430 (.0018)	.0052 (.0010)
(HYV) <sup>2</sup>	-.00085 (.00004)	-.00005 (.00002)
Constant	.1758	-.2208
R <sup>2</sup>	.9859	.9965

Notes: Dependent variable LN (Production)

Regressions weighted by area harvested

Standard errors in parentheses

Production, land, and fertilizer scaled relative to average levels in 1948-49-50.

HYV is the percent of the acreage of wheat or rice planted to "high yielding" varieties as defined by Dalrymple [1973].

lower than for wheat. The rate of diminution is also lower however.

These results are consistent with the fact that the wheats were adopted much more rapidly in the early stages of the green revolution than the rices. They are, of course, also consistent with the adoption patterns in many countries which suggest that adoption levels will fall far short of one hundred percent. In fact, in many cases it appears that less than fifty percent of the wheat and rice area is likely to be planted to the high yielding varieties. The major factor underlying these results is simply that the relative superiority of any form of agricultural technology is related to soil, climate and economic conditions. Adoption occurs first in areas where relative superiority is greatest and spreads later to areas where the degree of superiority is lower.

The availability of a controlled and adequate water supply has received major attention as a factor determining relative superiority of both the wheats and rices. Undeniably, it is of major importance in this regard. It is not the only factor, however. The high yielding varieties (especially the earliest varieties) are sensitive to soil types, to temperature, to solar radiation and other factors as well. A recent study of productivity gains in Indian agriculture, for example, did not reveal a high correlation of productivity gains with the existence of irrigation infrastructure (Evenson, 1973).

These results, while a great improvement over the prior local comparative studies for purposes of analyzing the aggregate contribution of high yielding varieties are still subject to serious limitations. The econometric limitations imposed by crude and meager data are fairly obvious. The coefficients on the land and fertilizer

variables are "reasonable" and consistent with expectations, however.<sup>5</sup> The results may be biased by weather effects, as well. The 1971 crop year in most of the region was probably abnormally poor. Unfortunately, we do not have data at hand to improve this basic formulation:

This simple model has treated new technology as being exclusively embodied in the high yielding rice and wheat varieties. For the entire period 1950-1971, this is surely unrealistic. The national research systems, even if relatively weak from a scientific standpoint were contributing to productivity growth. They were producing at least some competing technology to the Mexican and IRRI varieties. Furthermore, today, most of the high yielding varieties being adopted are in fact the products of national research systems.

#### Toward A Richer Specification

The dominant role of the green revolution in the recent agricultural development literature, in fact, provides a very misleading picture of growth in agricultural productivity and of its determinants. This stems largely from a more general lack of understanding of the factors determining real economic growth. Many development projects have been designed on the premise that the LDC farmer was ignorant and unresponsive to economic incentives, that relevant technology was actually in existence, and that the "missionary" extension agent was the key to changing farmer values and attitudes and leading him to adopt modern methods. The consistent failure of these programs to produce the results expected of them, created a setting in which the unexpected gains of the improved



wheat and rice varieties were treated as a godsend. In a way they were, of course, and hundreds of poorly conceived development projects were at least partially "bailed out" as the agencies responsible for them moved quickly to associate themselves with the miracle wheats and rices.

The publicity generated in the process masked a number of important facts. These include the fact that considerable and important agricultural productivity gains had been achieved in many less developed countries in the 1950's and early 1960's. The overall rate of productivity change in Indian agriculture was roughly the same from 1954 to 1960 as from 1966-1971 [Evenson 1973] (and India was the major green revolution country). Furthermore, we now have evidence that very little of this productivity resulted from the simple direct transfer of technology from developed countries.<sup>6</sup>

These factors limit the meaningfulness of the simple model of the previous section of this paper. An extension which specifically incorporates two types of research activity in the less developed countries is set forth and subjected to test in this section. The extended specification is:

$$(3) \quad Y_t / \bar{Y}_{50} = C(L_t / \bar{L}_{50})^{a_1} (F_t / F_{50})^{a_2} A_t^{(a_3 + a_4 S_t)} RA_t^{(a_5 + a_6 ZS_t + a_7 (A_t S_t))} \\ RY^{(a_8 + a_9 A_t)} EXP^{(a_{10} HYV_t + a_{11} HYV_t A_t + a_{13} (HYV_t)^2 + a_{14} t)}$$

The variables  $Y_t$ ,  $L_t$ ,  $F_t$ ,  $HYV_t$ ,  $HYV_t^2$  are as in (2).

The variables  $A_t$ ,  $S_t$ ,  $RA_t$  and  $ZS_t$  are measures of research activity. Each is measured as a cumulation of research activity from 1942 to time  $t$  as:

$$A_t = \sum_{1942}^{t-5} P_t + .8P_{t-4} + .6P_{t-3} + .4P_{t-2} + .2P_{t-1}$$

The research measures are based on the number of publications ( $P_t$ ) which have been screened for commodity relevance and for scientific significance by two international abstracting journals. Plant Breeding Abstracts and Biological Abstracts.

$A_t$  is a measure of the research undertaken in agronomy and plant breeding specifically with wheat or rice.

$S_t$  is a measure of research activity in plant physiology, phytopathology and soil-science. This work is not commodity specific and represents agriculturally related scientific research activity.

$RA_t$  measures agronomic and plant breeding research activity in countries other than the country in question, but which are in the same geo-climate region.

$ZS_t$  measures agriculturally related scientific research in other countries located in the same geo-climate zone.

$RY_t$  is a measure of the average level of cereal grain yields in other countries in the same geo-climate region.

All research variables are expressed on a per sub-region basis.

These latter three variables are designed to incorporate geographic technology transfer specifically, if somewhat crudely, into the analysis. The geo-climate regions and zones are defined as modifications of the agricultural climate classification of Papadakis [1966] and are discussed extensively in Evenson [1973]. Table 2 provides summary information for 33 major geo-climate zones grouped in 9 geo-climate zones. For

Table 3. Geo-Climatic Region Research in Cereal Grain Production.

Region #	Publications (1942-70) per Sub-Region					Cer. Pub. per Sub-Region	Basic/Crop of Sub-Regions	Adjusted Number of Sub-Regions	LDC Share	Cereal Grain Yields		
	Wheat	Barley	Maize	Sorghum	Rice					1950-51 (kg/ha)	1960-67 (kg/ha)	Ratio
1. Tropical Zone						4873	79074					
1.1 Humid Equatorial	—	—	30.2	11.6	111.8	51.6	1.06	15.91	1.00	11.00	13.79	1.253
1.2 Humid Tropical	1.5	.2	15.1	2.1	121.7	28.1	.32	5.00	.86	16.94	24.62	1.45
1.3 Dry Equatorial	—	—	4.7	1.1	22.5	8.2	1.53	4.00	1.00	10.01	14.53	1.37
1.4 Hot Equatorial	8.4	—	19.3	13.0	224.5	68.7	.96	10.22	.95	10.57	13.56	1.28
1.5 Semi-Arid Equatorial	.0	—	4.1	32.2	8.6	8.0	.65	6.35	1.00	8.46	10.89	1.28
1.7 Humid Tierra	20.4	20.4	30.6	25.0	20.8	24.1	.85	16.19	1.00	12.38	12.91	1.04
1.8 Dry Tierra	—	—	42.4	—	18.1	52.8	.50	2.06	1.00	14.49	10.11	.70
1.9 Cool Winter Tropical	—	—	18.5	87.4	353.1	144.9	1.00	5.58	.66	10.39	13.77	1.33
2. Tierra Fria Zone						52.1	.62					
2.1 Tropical Highlands	8.0	6.7	132.9	28.2	—	52.1	.62	8.72	1.00	7.93	12.84	1.619
3. Desert Zone						15.6	2.69					
3.1 Hot Tropical	.0	—	2.0	—	4.5	2.3	.22	3.00	1.00	28.28	31.66	1.13
3.2 Hot Subtropical	20.9	11.8	—	—	6.7	15.8	.76	16.94	1.00	8.99	11.00	1.31
3.7 Continental	1.4	1.6	.0	.0	93.5	24.5	6.26	4.00	.60	9.98	11.63	1.19
4. Subtropical Zone						54.9	1.18					
4.1 Humid	30.4	4.7	51.6	1.6	63.0	28.4	1.20	9.22	.75	6.83	9.01	1.320
4.2 Monsoon	116.6	128.1	69.7	144.9	52.0	102.7	1.31	6.91	.66	12.50	15.65	1.25
4.3 Hot	105.7	46.7	47.6	156.8	6.6	68.7	.99	6.05	1.00	5.21	7.41	1.42
4.4 Semi-Arid	—	—	10.0	5.0	—	7.5	.80	2.00	1.00	14.21	17.93	1.26
5. Palearctic Zone						97.3	1.23					
5.1 Palearctic	99.5	99.0	168.4	36.6	—	97.3	1.23	4.53	.20	13.61	16.73	1.229
6. Mediterranean Zone						39.6	1.95					
6.1 Subtropical	72.9	71.3	33.5	11.7	104.9	55.4	2.59	18.66	.45	10.14	13.03	1.284
6.2 Marine	14.0	2.2	34.4	12.0	.0	16.8	.80	7.24	.25	9.20	13.32	1.45
6.5 Temperate	77.3	18.9	45.5	4.0	23.5	37.4	1.90	11.27	.17	11.93	15.30	1.33
6.7 Continental	67.0	27.7	133.4	8.3	1.6	47.5	1.11	19.68	.30	10.79	14.48	1.34
6.8 Subtrop. Semi-Arid	46.9	22.8	21.3	6.0	—	26.7	1.68	14.26	.50	8.64	9.75	1.13
6.9 Contin. Semi-Arid	44.6	3.0	9.0	1.0	—	5.8	.20	4.61	.66	6.16	6.48	1.05
7. Marine Zone						120.1	2.02					
7.1 Warm	11.5	5.4	—	—	—	8.4	2.00	2.00	.00	17.01	28.13	1.654
7.2 Cool	78.9	236.3	92.9	—	—	136.1	3.10	6.51	.00	25.13	35.48	1.41
7.6 Cool Temperate	97.1	145.8	158.9	20.3	—	120.3	1.75	21.71	.03	22.12	34.32	1.57
7.7 Cold Temperate	90.6	144.8	167.9	—	—	133.9	1.46	8.00	.00	18.44	26.00	1.57
8. Humid Continental Zone						256.2	2.79					
8.1 Warm	152.4	151.2	450.5	92.2	417.0	254.3	4.60	7.62	.00	19.61	34.02	1.735
8.2 Semi-Warm	164.3	124.1	703.0	283.5	622.3	291.5	1.50	12.16	.00	24.43	42.54	1.74
8.3 Cold	52.0	17.0	—	—	—	34.5	.63	2.00	.00	18.77	33.55	1.79
9. Steppe Zone						357.9	1.35					
9.2 Semi-Warm	606.5	346.6	818.6	304.2	24.7	450.3	1.10	12.92	.00	11.57	18.26	1.578
9.3 Cold	636.4	348.5	111.9	12.0	—	382.3	1.75	7.28	.00	12.29	21.14	1.68
9.4 Temperate	38.2	35.5	—	—	—	36.9	1.96	4.32	.00	10.11	14.62	1.47

Notes: Publications data from Evenson, R. E. and Kislev, I. [1971].

Sub-regions are defined as  $n(1-d) + d$  where  $n$  is the number of individual countries in the region, and

$$d = \frac{\sum_{i=1}^n A_i - \bar{A}}{(2A_1 - 2)\bar{A}} \quad A_i \text{ is the acreage of the crop in country } i.$$

The term  $d = 0$ , when all countries in the region have the same acreage, approaches 1 as acreage in the region is concentrated in one country.

Cereal grain yields are computed by simply totaling cereal production of the different grains without price weighting. While prices vary considerably by country, international prices per kg are approximately the same for all cereals.



purposes of this paper, geo-climate zone 1 includes most of the LDC rice production and geo-climate zones 1, 3, and 4 include the LDC wheat producing areas.

The table indicates the 1971 levels of the variables.  $A_t$  and  $S_t$  expressed on a "sub-region" basis. The  $A_t$  variable is reported for each significant crop produced in the region and for all cereals. These measures give an indication of research activity per major research "problem." As the table indicates the relative levels of research activity in the largely developed climate zones (7, 8 and 9) have been roughly five times as great as the levels in the less developed climate zones (1, 2, 3 and 4). The disparity in research activity in the supporting sciences ( $S_t$ ) is much greater. The cereal yield data shown in the table give a crude indication of economic performance by region.

Table 3 reports regression results based on the more complex specification. The wheat and rice regressions indicate that indigenous research activity has influenced productivity gains. The high yielding variety variables included in the regressions indicate that the green revolution also contributed independently to productivity growth. In both the wheat and rice regressions the negative interaction term between high yielding varieties and agronomic research indicates that the margin of superiority of the high yielding varieties is lower, the higher the level of national agronomic research activity. The inclusion of the national research system variables lowers the estimated production effect of the high yielding wheats.

The regressions do reflect a significant degree of international transfer of research findings in both wheat and rice production. In fact, the dominant research variable in regressions for both wheat and rice is the

Table 3

Regression Analysis Based on Specification (3)

Independent Variables:	<u>Wheat Production</u>	<u>Rice Production</u>	<u>Cereal Grains Production</u>
	13 Asian-Middle Eastern Countries 1948-71 307 Observations	12 Asian-Middle Eastern Countries 1948-71 282 Observations	20 Asian-Middle Eastern Countries 1948-71 1050 Observations
LN (Land)	.9887 (.0010)	.9756 (.0016)	.9867 (.0015)
LN (Fert)	.0120 (.009)	.0419 (.0054)	.0796 (.0052)
HYV	.0049 (.0035)	.0234 (.0019)	.0212 (.0014)
HYV <sup>2</sup>	.00016 (.00002)	-.00051 (.000005)	-.00038 (.00010)
HYV* A	-.00001 (.000002)	-.00001 (.00001)	.000001 (.000001)
LN(A)	-.0061 (.0020)	.0356 (.0040)	-.0033 (.0021)
LN(A)* S	-.00029 (.00002)	.00002 (.00001)	.00011 (.00001)
LN(RA)	-.0111 (.0025)	-.0359 (.0024)	.00077 (.00800)
LN(RA)* ZS	.00037 (.00003)	.00089 (.00001)	.00067 (.00006)
LN(RA)* (A+S)	-.00037 (.00005)	.00066 (.00013)	.00012 (.00001)
LN(RA)* (A+S) <sup>2</sup>			-.0000010 (.0000001)
LN(RY)			-.066 (.025)
LN(RY)* A			-.00059 (.00006)
Time	.012 (.001)	-.018 (.003)	*
constant	-.377	1.22	.98
R <sup>2</sup>	.9983	.9905	.9924

Regressions weighted by acreage  
Standard errors in parentheses

\*Crop specific time trends are included in the equations.

interaction variable of regional agronomic research and zonal supporting science research (LN(RA)\*ZS). The wheat regression shows complementarity between indigenous and regional research while the rice regression shows substitutability. That is, the higher the level of indigenous research on wheat, the more valuable is regional research on wheat. For rice the higher the level of indigenous research the less valuable the regional research.

The regression based on cereal grains production in the Asian-Middle Eastern region probably identifies the underlying relationships between research activities and productivity growth best. It indicates that for all cereal grains:

1. National agronomic and plant breeding research has contributed significantly to realized productivity growth. In addition to a direct contribution to the economy in which the research is conducted on indirect contribution to other economies in similar geo-climate regions has been realized.

2. Indigenous research programs are complementary to regional research contributions at low levels and substitute for regional or transferred research at high levels.

3. In the case of both indigenous and transferred research contributions by agronomic and plant breeding research, the indirect contribution of supporting scientific research in plant physiology, phytopathology and soil science has been very significant. In fact, the apparent marginal contribution to production of a dollar expended on supporting scientific research exceeds that of the applied agronomic and plant breeding research.



4. It would appear that most technology transfer takes an indirect rather than a direct form. The regional yield variables do not dominate the regional research variables. The negative interaction term between regional yield levels and indigenous agronomic research indicates that indigenous research is indeed producing substitute or competing technology. Much of the transfer apparently takes the form of "knowledge" as opposed to tangible technology. Regressions (not reported here) which included research conducted outside similar geo-climate regions indicated no contribution forthcoming from this research.

Given the crudity of these data and the possible errors of measurement, a strict hypothesis testing interpretation of the reported standard errors is probably not justified. Nonetheless, the overall statistical quality of the results seems high enough to warrant a discussion of policy implications.<sup>8</sup>

#### Policy Implications

This analysis reaches the conclusion that while the high yielding varieties did contribute very significantly to increased production, they were by no means the sole source of productivity gains in LDC agriculture. A crude "growth accounting" (based on the cereal grains regression in Table 3) indicates that less than 25 percent of the productivity gains (net of land and fertilizer contributions) realized in cereal grains production are associated with the high yielding varieties. (For the period, since 1966, of course, the proportion is much higher than this.) The remaining growth is about equally accounted for by indigenous research discovery and regional or "borrowed" research discoveries.

The contribution of the high yielding varieties computed from this study is given in Table 4. Obviously these contributions have been of major importance. Interestingly, this contribution, continues to increase into 1970-71.

Even if the rate of adoption of high yielding varieties slows significantly in the near future, there is a basis for some optimism in this analysis. The national research systems in the region have been undergoing relatively rapid development in the 1960's and should be contributing significantly to productivity growth in the 1970's and 1980's. An aggressive policy of investment in these systems can more than offset the slowdown in the green revolution contribution.

TABLE 4  
COMPUTED DOLLAR VALUE OF THE PRODUCTION DUE TO  
HIGH YIELDING VARIETIES\*

(millions of 1970 U.S. dollars)

	<u>1970-71</u>	<u>1969-70</u>	<u>1968-69</u>	<u>1967-68</u>	<u>1966-67</u>	<u>1965-66</u>
wheat	2,173	1,488	1,443	957	174	,03
Rice	1,205	912	555	310	120	,001

\*Based on Table 3.

The finding that the discoveries of researchers are transferred within the particular geo-climate regions defined here, but not across those regions to any appreciable extent has obvious implications. The task of building first rate research institutions in countries and regions with limited supplies of scientific skills is indeed difficult. It appears that there

are no alternatives, however. Surely more aggressive action toward this objective is called for.

Finally, these results indicate that the most productive research at the margin is not the applied agronomic and plant breeding research, but the supportive science research. Computations based on Table 3, indicate that a dollar expended on agronomic research will produce an expected stream of increased product which rises over a period of 12 or so years to a level of \$2.50 in the country undertaking the research. In addition the research benefits other countries by a similar amount. A dollar invested in supportive science research has an expected benefits stream of approximately \$3.00 which the conducting country might appropriate, but a much larger contribution (on the order of \$8 to \$10) to be transferred to other producing countries.



## FOOTNOTES

<sup>1</sup>This is not to denigrate the contributions of a number of the dedicated scientists involved. The point here is that when compared to other discoveries made by agricultural scientists, they were not unusual.

<sup>2</sup>See Evenson, Houck and Ruttan [1970] for a discussion of this early green revolution in sugarcane production.

<sup>3</sup>Note that production, land and fertilizer are measured relative to the average levels in the 1948-49-50 period. We are thus analyzing only changes relative to that period.

<sup>4</sup>If a "left out" variable is perfectly correlated with an included variable, the estimated coefficient for the included variable will be biased. The bias will be the multiple of the "true" coefficient on the left-out variable times the correlation coefficient for the two variables.

<sup>5</sup>The coefficient on the land variable should be close to one if it is picking up the effects of the left out variables (machinery-labor and animal power).

<sup>6</sup>See Kislev and Evenson [1973] for an analysis of technology transfer in wheat and maize production.

<sup>7</sup>The screening of the abstracting journals is very important. Not only does the screening and classification allow an internationally consistent measure of commodity specific agronomic research, but it imposes a quality standard. Roughly one third of the publications from U.S. Agricultural Experiment Stations are included in this measure for example, Kislev & Evenson [1973].

<sup>8</sup>In further works, several modifications are planned, including the use of Nerlove-Balaestra estimating techniques.

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6/26/74

A Note on the Consultative Group on  
International Agricultural Research

At the initiative of the World Bank, a Consultative Group on International Agricultural Research was founded in early 1971. The main purpose of the Consultative Group is to mobilize long-term financial support from international agencies, governments and private sources for financing international agricultural research institutions.

The Consultative Group has, at present, 30 members. They include the World Bank as Chairman, FAO and UNDP as co-sponsors as well as 13 governments - Australia, Belgium, Canada, Denmark, France, Germany, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States -, three regional Development Banks - African, Asian and Inter-American Development Bank -, the Commission of the European Communities, three private Foundations - Ford, Rockefeller and Kellogg Foundation -, and the International Development Research Centre, an independent Canadian organization.

The five major developing regions of the world participate in the Consultative Group through representatives designated for a two-year term by the membership of FAO. Each region has designated two countries which alternate as members at their discretion. Representing Latin America are: Argentina and Brazil; representing Africa: Morocco and Nigeria; representing Asia and the Far East: the Philippines and Thailand; representing the Middle East: Lebanon and Pakistan; representing Southern and Eastern Europe: Israel and Roumania.

The first meeting of the Consultative Group was held in Washington on May 19, 1971. The Group agreed, among other things, (a) to review the needs of developing countries for special efforts in international and regional

agricultural research and associated training in critical subject sectors unlikely otherwise to be covered adequately by existing research facilities, and to consider how these needs could be met, (b) to review the financial and other requirements of those agricultural research activities which the Group considers to be of high priority, and to consider providing finance for those activities, and (c) to suggest feasibility studies of specific proposals and to agree on how these studies should be undertaken and financed.

The Group also appointed 12 experts (as of July 1, 1972 there are 13 experts) to constitute a Technical Advisory Committee (TAC) to assist its work. TAC's terms of reference are to:

- (i) advise the Consultative Group on the main gaps and priorities in agricultural research related to the problems of the developing countries, both in the technical and socio-economic fields, based on a continuing review of existing national, regional and international research activities;
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- (iv) advise the Consultative Group on the effectiveness of specific existing international research programs; and
- (v) in other ways encourage the creation of an international network of research institutions and the effective interchange of information among them.

The members of the Consultative Group are presently supporting six existing international centers already in operation; two more in the process of being established; and two related activities. The Maize and Wheat Improvement Center (Centro Internacional de Mejoramiento de Maiz y Trigo, or CIMMYT), based in



Mexico; the International Rice Research Institute (IRRI), based in the Philippines; the International Center for Tropical Agriculture (Centro Internacional de Agricultura Tropical, or CIAT), based in Colombia; the International Institute for Tropical Agriculture (IITA), based in Nigeria; and the International Potato Center (Centro Internacional de Papa, or CIP) recently established in Peru. In addition, members of the Group are presently supporting the establishment of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); it is based in India, and its Governing Board was constituted in early July 1972; The Institute for Research on Animal Diseases (ILRAD), based in Kenya; the International Livestock Research Center - Africa (ILCA) being established in Ethiopia; the West Africa Rice Development Association (WARDA), with headquarters in Liberia; and the International Board on Plant Genetic Resources with headquarters in FAO, Rome. In 1974, the members are contributing approximately \$33 million to meet the financial needs of these ten enterprises.

TAC has defined "international research" broadly to mean research which, although based in one country, is of wider concern, regionally or globally; is independent of national interest and government control; and retains appropriate links with national research systems to ensure the necessary testing of results and the feedback of both results and needs. The centers whose activities are being supported within the framework provided by the Consultative Group all have international Boards of trustees and their staffs are international.



A.I.D.'S PARTICIPATION IN THE INTERNATIONAL  
AGRICULTURAL RESEARCH CENTERS

The international agricultural research centers described below are funded by donor members of the Consultative Group on International Agriculture (CG). The U.S. (through A.I.D.) is the largest donor, providing about 25% of the core and capital budget requirements of the Centers. There are about 19 other donors made up of countries, international organizations and U.S. foundations. Developing countries are included in the CG membership through representatives from each of the five FAO regions.

Each Center is governed by an international Board of Trustees (or directors). The interdisciplinary scientific staffs are likewise international in character. Research is problem-oriented, and coupled with training and outreach programs designed to strengthen national capabilities in agricultural research and production.

1. International Rice Research Center (IRRI)

Location: Los Banos, The Philippines  
(P.O. Box 583, Manila, The Philippines)

Research Orientation:

Multidisciplinary research intended to increase rice productivity, especially in Asia, and to improve its nutritive quality. High yielding rice varieties, together with a package of management practices to greatly increase yields in important rice growing regions, have been produced by combined efforts of plant breeders, pest control specialists, agronomists, soil scientists, irrigation and equipment engineers. Intensive research

is underway to develop varieties with built-in resistance to pests, unfavorable soil and water conditions, and with genetic traits for improved protein content and quality, to support rice production in more of the widely differing environments in which rice is grown, on a worldwide basis. Research into multiple-cropping systems and into problems of rain-fed lowland and upland rice is supplemental to continuing research on rice grown under controlled irrigation.

Budget Support (actual for 1973; estimated for  
1974, 1975)  
(In Millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$2.9	\$0.725
1974	4.9	1.100
1975	8.6	2.150

2. International Maize and Wheat Improvement Center (CIMMYT)

Location: El Batan, Mexico  
Address: Londres 40, Mexico 6, D. F.

Research Orientation

Established 1969 to assist developing countries increase their production of corn and wheat. High-yielding, widely-adapted, semi-dwarf wheat varieties have been produced (building on earlier cooperative research between Mexico and the Rockefeller Foundation), and a package of cultural practices to exploit yielding capacity have been successfully introduced in many wheat deficient countries. Research is continuing on pest and drought-resistant variants of high-yielding varieties, with improved protein content, that will extend profitable wheat culture into many additional developing countries. A parallel program on breeding corn for higher yields, improved nutritive quality, resistance to insect pests and diseases, tolerance of unfavorable soils and climates continues to produce genetic types for plant breeders in many tropical environments. CIMMYT maintains the richest collection of corn germplasm resources in the world for use by corn breeders in the tropics and subtropics.

Budget Support (actual for 1973; estimated for  
1974,1975)

(In Millions)

FY	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$6.1	\$1.500
1974	5.8	1.500
1975	6.5	1.625



3. International Center for Tropical Agriculture (CIAT)

Location: Cali, Colombia, S.A.

Research Orientation

To identify and seek solutions to problems of agriculture in the lowland tropics, particularly in (a) the infertile, highly acid savanna lands of Colombia and Brazil, (b) the lowlands of coastal plains and alluvial river valleys, and (c) the low mountain valleys in Latin America. Research is concentrating on beef, swine, cassava, beans, rice, and maize and on farming systems. There is close cooperation with IRRI and CIMMYT. In connection with beef production, research includes attention to the promising forage legume, Stylosanthes guyanensis. Additionally, there is work on immunization techniques for protection of livestock against hemoprotozoal diseases that cause heavy losses in Latin America.

Budget Support (actual for 1973; estimated for  
1974, 1975)  
(In Millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. support</u>
1973	\$4.3	\$0.875
1974	6.0	.950
1975	6.3	1.575

4. International Institute for Tropical Agriculture (IITA)

Location: Ibadan, Nigeria, Africa

Research Orientation:

Established in 1968 to study of problems for improvement of food production in the humid tropics, and on the soil and crop management requirements for developing a stable, permanent agriculture. Attention is focused on (a) farming systems for food production in the lowland tropics, (b) cereal improvement, in cooperation with IRRI on rice, and with CIMMYT on maize, (c) food grain legume improvement, with major attention to cowpeas and lesser attention to pigeon peas, lima beans and soybeans, (d) root and tuber crop improvement with emphasis on yams, sweet potatoes and cassava and (d) farming systems involving a study of the "slash and burn" practice. Progress is being made in identifying strains of cereals and root crops with improved protein content, particularly the amino acid, lysine, that is generally deficient in such crops.

Budget Support (actual for 1973; estimated for  
1974,1975)

(In Millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$5.5	\$1.200
1974	6.3	1.500
1975	7.1	1.800

5. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

Location: Hyderabad, India

Research Orientation:

Established in 1972 (a) to serve as the world center for improvement of genetic potential for grain yield and nutritional quality of sorghum, pearl millet, pigeon peas and chickpeas; (b) to develop farming systems that will be more productive in the seasonally dry semi-arid tropics, and (c) to assist national and regional research programs in other tropical and subtropical regions.

Attention will be concentrated on farming systems that emphasize efficient soil management and utilization of rainfall for crop production.

The research staff is to be multidisciplinary, and international in character, fully assembled by 1974.

Budget Support (actual for 1973; proposed for 1974, 1975)  
(In millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$3.0	\$0.745
1974	5.6	1.000
1975	10.3	2.500



6. International Potato Center (CIP)

Location: La Molina, Peru, S.A.

Research Orientation:

Established in 1972 to enhance world's capacity to meet goals of increased output and greater efficiency in production of potatoes, for both highland and lowland tropical areas. The major projects include (a) development of a potato germplasm for the full range of genetic variability for tuber-bearing Solanum species, (b) the development of diseases, viruses and insect pests, (c) the development of cold resistance, and (d) increasing the protein content of potato tubers. Completion of facilities construction and assembly of the international staff of research scientists is planned by end of calendar year 1974.

Budget Support(actual 1973; proposed 1974, 1975)

(In millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$1.4	\$0.340
1974	2.3	.550
1975	2.	.560

7. International Laboratory for Research on Animal Diseases (ILRAD)

Location: Kabete (near Nairobi), Kenya, Africa

Research Orientation:

This Center will deal initially with two important livestock diseases that occur in tropical and subtropical areas: trypanosomiasis and East Coast Fever. It will undertake studies that require sophisticated facilities and specific research specialists that are generally beyond the capacity of individual countries. These diseases are regional in their occurrence and cause severe losses of livestock if allowed to multiply unchecked.

ILRAD was scheduled for starting in FY '73, but construction of facilities and assembly of the research staff will continue in calendar years 1974 and 1975.

A.I.D. made a "starter" contribution of \$100,000 for 1973; this was to be supplemented by \$242,000 in 1974.

8. International Livestock Research Center (ILCA)

Location: Ethiopia, south of Addis Ababa

Research Orientation:

The initial effort will begin with the collection of information on tropical and subtropical livestock production, both published and unpublished, and the retrieval, storage, and classification of such information to serve research and development programs. Attention will be directed toward characterization of the common livestock production systems as a basis for designing suitable research projects. Research activities will be concentrated on techniques of rangeland management, livestock production, disease control, dry season animal nutrition, forage supplies, including supplemental forages, livestock reproductive performance, and all technological aspects of marketing. Priority will be given to cattle, sheep, goats, buffaloes and camels, in that order. The institute will deal with production on dry ranges, in humid regions, and in mixed crop-livestock systems.

This institute is expected to be initiated in late 1974 with a "start-up" budget to which AID has contributed \$100,000.



US (AID) Contributions to International Centers (Approximate)

(Core plus capital budgets)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
IRRI			.350	.750	.750	.725	1.100
CIMMYT		.425	.525	.769	1.090	1.500	1.350
IITA			.450	1.145	1.005	1.200	1.500
CIAT			.200	.680	.721	.875	.950
CIP					.100	.340	.550
ICRISAT					.100	.745	1.000
ILRAD						}	.342
ILCA							.100
WARDA							.108
		.425	1.525	2.344	3.746	5.385	7.000

INVESTMENT IN INTERNATIONAL AGRICULTURAL RESEARCH INSTITUTES

The following figures (\$U.S. million) show yearly core program and capital costs of the eight international agricultural research institutes and related activities supported by the Consultative Group\* for the period 1968-77. Costs for 1968-71 are actual; those for 1972-77 are estimated. Support for CIP started in 1971; for ICRISAT in 1972. CG support was initiated in 1971. Prior to that most of the inputs were met by the Ford and Rockefeller Foundations. The data do not include support for special projects or specific outreach projects; these normally are funded through bilateral arrangements.

	68	69	70	71	72	73	74	75	76	77
IRRI	1.63	1.94	2.13	2.68	2.90	2.9	4.9	8.6	6.6	7.5
CIMMYT	1.38	2.16	4.44	5.06	5.0	6.1	5.8	6.5	6.8	7.0
IITA	2.62	4.57	6.63	5.33	7.7	5.5	6.3	7.1	7.6	7.8
CIAT	.21	1.43	2.20	3.57	6.1	4.3	6.0	6.3	7.5	8.3
CIP	--	--	--	.57	.9	1.4	2.3	2.3	2.7	2.9
ICRISAT	--	--	--	--	.5	3.0	5.6	10.3	10.0	7.2
ILRAD	--	--	--	--	--	.4	?	?	?	?
ILCA	--	--	--	--	--	.4	?	?	?	?
WARDA	--	--	--	--	--	--	.4	.8	.8	.9
GENES	--	--	--	--	--	--	.4	?	?	?
Total	5.84	10.10	15.40	17.21	23.1	24.0	33.7+	41.9 +?	42.0 +?	41.6 +?

It is highly probable that additional international agricultural center/activities will be funded by the CGIAR in the near future. For example, consideration is being given to establishment of an international research center for the Near East-North Africa region. It now appears that CGIAR funding needs might reach \$50 million by 1975.

\*IRRI - International Rice Research Institute (Philippines); CIMMYT- International Center for Corn and Wheat Improvement (Mexico); IITA - International Institute for Tropical Agriculture (Nigeria); CIAT - International Center for Tropical Agriculture (Colombia); CIP - International Potato Center (Peru); ICRISAT - International Crop Research Institute for the Semi-Arid Tropics (India); ILRAD - International Laboratory for Research on Animal Diseases (Kenya); ILCA - International Livestock Center - Africa (Ethiopia); WARDA - West African Rice Development Association (Liberia); and International Board on Plant Genetic Resources (headquarters - FAO, Rome).

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CGIAR

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Location: Cali, Colombia, S.A.

Research Orientation

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1975	6.3	1.575



4. International Institute for Tropical Agriculture (IITA)

Location: Ibadan, Nigeria, Africa

Research Orientation:

Established in 1968 to study of problems for improvement of food production in the humid tropics, and on the soil and crop management requirements for developing a stable, permanent agriculture. Attention is focused on (a) farming systems for food production in the lowland tropics, (b) cereal improvement, in cooperation with IRRI on rice, and with CIMMYT on maize, (c) food grain legume improvement, with major attention to cowpeas and lesser attention to pigeon peas, lima beans and soybeans, (d) root and tuber crop improvement with emphasis on yams, sweet potatoes and cassava and (d) farming systems involving a study of the "slash and burn" practice. Progress is being made in identifying strains of cereals and root crops with improved protein content, particularly the amino acid, lysine, that is generally deficient in such crops.

Budget Support (actual for 1973; estimated for  
1974,1975)

(In Millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$5.5	\$1.200
1974	6.3	1.500
1975	7.1	1.800

5. International Crops Research Institute for the Semi-Arid Tropics  
(ICRISAT)

Location: Hyderabad, India

Research Orientation:

Established in 1972 (a) to serve as the world center for improvement of genetic potential for grain yield and nutritional quality of sorghum, pearl millet, pigeon peas and chickpeas; (b) to develop farming systems that will be more productive in the seasonally dry semi-arid tropics, and (c) to assist national and regional research programs in other tropical and subtropical regions.

Attention will be concentrated on farming systems that emphasize efficient soil management and utilization of rainfall for crop production.

The research staff is to be multidisciplinary, and international in character, fully assembled by 1974.

Budget Support (actual for 1973; proposed for  
1974, 1975)  
(In millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$3.0	\$0.745
1974	5.6	1.000
1975	10.3	2.500

6. International Potato Center (CIP)

Location: La Molina, Peru, S.A.

Research Orientation.

Established in 1972 to enhance world's capacity to meet goals of increased output and greater efficiency in production of potatoes, for both highland and lowland tropical areas. The major projects include (a) development of a potato germplasm for the full range of genetic variability for tuber-bearing Solanum species, (b) the development of diseases, viruses and insect pests, (c) the development of cold resistance, and (d) increasing the protein content of potato tubers. Completion of facilities construction and assembly of the international staff of research scientists is planned by end of calendar year 1974.

Budget Support(actual 1973; proposed 1974, 1975)

(In millions)

<u>FY</u>	<u>Total Support, all sources</u>	<u>A.I.D. Support</u>
1973	\$1.4	\$0.340
1974	2.3	.550
1975	2.	.560



7. International Laboratory for Research on Animal Diseases (ILRAD)

Location: Kabete (near Nairobi), Kenya, Africa

Research Orientation:

This Center will deal initially with two important livestock diseases that occur in tropical and subtropical areas: trypanosomiasis and East Coast Fever. It will undertake studies that require sophisticated facilities and specific research specialists that are generally beyond the capacity of individual countries. These diseases are regional in their occurrence and cause severe losses of livestock if allowed to multiply unchecked.

ILRAD was scheduled for starting in FY '73, but construction of facilities and assembly of the research staff will continue in calendar years 1974 and 1975.

A.I.D. made a "starter" contribution of \$100,000 for 1973; this was to be supplemented by \$242,000 in 1974.

8. International Livestock Research Center (ILCA)

Location: Ethiopia, south of Addis Ababa

Research Orientation:

The initial effort will begin with the collection of information on tropical and subtropical livestock production, both published and unpublished, and the retrieval, storage, and classification of such information to serve research and development programs. Attention will be directed toward characterization of the common livestock production systems as a basis for designing suitable research projects. Research activities will be concentrated on techniques of rangeland management, livestock production, disease control, dry season animal nutrition, forage supplies, including supplemental forages, livestock reproductive performance, and all technological aspects of marketing. Priority will be given to cattle, sheep, goats, buffaloes and camels, in that order. The institute will deal with production on dry ranges, in humid regions, and in mixed crop-livestock systems.

This institute is expected to be initiated in late 1974 with a "start-up" budget to which AID has contributed \$100,000.

US (AID) Contributions to International Centers (Approximate)

(Core plus capital budgets)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
IRRI			.350	.750	.750	.725	1.100
CIMMYT		.425	.525	.769	1.090	1.500	1.350
IITA			.450	1.145	1.005	1.200	1.500
CIAT			.200	.680	.721	.875	.950
CIP					.100	.340	.550
ICRISAT					.100	.745	1.000
ILRAD							.342
ILCA							.100
WARDA							.108
		.425	1.525	2.344	3.746	5.385	7.000



INVESTMENT IN INTERNATIONAL AGRICULTURAL RESEARCH INSTITUTES

The following figures (\$U.S. million) show yearly core program and capital costs of the eight international agricultural research institutes and related activities supported by the Consultative Group\* for the period 1968-77. Costs for 1968-71 are actual; those for 1972-77 are estimated. Support for CIP started in 1971; for ICRISAT in 1972. CG support was initiated in 1971. Prior to that most of the inputs were met by the Ford and Rockefeller Foundations. The data do not include support for special projects or specific outreach projects; these normally are funded through bilateral arrangements.

	68	69	70	71	72	73	74	75	76	77
IRRI	1.63	1.94	2.13	2.68	2.90	2.9	4.9	8.6	6.6	7.5
CIMMYT	1.38	2.16	4.44	5.06	5.0	6.1	5.8	6.5	6.8	7.0
IITA	2.62	4.57	6.63	5.33	7.7	5.5	6.3	7.1	7.6	7.8
CIAT	.21	1.43	2.20	3.57	6.1	4.3	6.0	6.3	7.5	8.3
CIP	--	--	--	.57	.9	1.4	2.3	2.3	2.7	2.9
ICRISAT	--	--	--	--	.5	3.0	5.6	10.3	10.0	7.2
ILRAD	--	--	--	--	--	.4	?	?	?	?
ILCA	--	--	--	--	--	.4	?	?	?	?
WARDA	--	--	--	--	--	--	.4	.8	.8	.9
GENES	--	--	--	--	--	--	.4	?	?	?
Total	5.84	10.10	15.40	17.21	23.1	24.0	33.7+	41.9	42.0	41.6
								+?	+?	+?

It is highly probable that additional international agricultural center/activities will be funded by the CGIAR in the near future. For example, consideration is being given to establishment of an international research center for the Near East-North Africa region. It now appears that CGIAR funding needs might reach \$50 million by 1975.

\*IRRI - International Rice Research Institute (Philippines); CIMMYT- International Center for Corn and Wheat Improvement (Mexico); IITA - International Institute for Tropical Agriculture (Nigeria); CIAT - International Center for Tropical Agriculture (Colombia); CIP - International Potato Center (Peru); ICRISAT - International Crop Research Institute for the Semi-Arid Tropics (India); ILRAD - International Laboratory for Research on Animal Diseases (Kenya); ILCA - International Livestock Center - Africa (Ethiopia); WARDA - West African Rice Development Association (Liberia); and International Board on Plant Genetic Resources (headquarters - FAO, Rome).

GBB:11-14-72

Revised 6-26-74

→ File - CGIAR

477-3542

May 15, 1974

Mr. Harold Graves  
Executive Secretary  
Consultative Group on International  
Agriculture Research  
IBRD  
1818 H Street, N. W.  
Washington, D. C. 20433

Dear Harold:

Thank you for your letter enclosing the sheet showing allocations from Consultative Group members to international agricultural research programs in calendar year 1974.

With a few exceptions data shown on your enclosed sheet as grants by AID are correct. The exceptions are: \$100,000 to ILRAD instead of \$330,000, and \$108,000 to WARDA instead of \$110,000. I understand that AID has \$242,000 to apportion between ILRAD and ILCA.

Upon Dr. Guy Baird's return early next week he will discuss with you the apportionment.

Sincerely,

5  
Joel Bernstein

*Sent copy to Leake  
Discussed by phone with Graves: he feels the \$242,000 should  
go to ILRAD - can be used effectively this year; is not  
needed by ILCA. This additional allocation to ILRAD will  
not exceed our 25% ceiling.  
Asked Holmes to go ahead with allocation to ILRAD  
anticipating concurrence from AFR/WARA.*

*ABH  
5/21*

Clearance:

*TA/AGR, MGalli*

*RH*  
TA/AGR/RHolmes

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address - INTBAFRAD

*Action  
Baird*

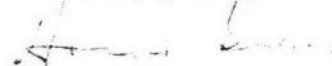
*Copy  
JB  
Keller*

May 6, 1974

Dear Joel:

Here is a sheet showing allocations from Consultative Group members to international agricultural research programs in the calendar year 1974. Could you have this examined and then inform me whether it is correct in so far as AID grants are concerned? We would like to have this information soon, so that we can proceed with the second tranche of grants from IDA in the light of the allocations already made by AID and other donors.

Sincerely yours,



Harold Graves

Enclosure

Dr. Joel Bernstein  
Assistant Administrator  
Technical Assistance Bureau  
United States Agency for  
International Development  
320-21st Street, N. W.  
Washington, D. C. 20523

*1-670*



CGIAR ALLOCATIONS, 1974 (\$ million)

	<u>Total</u>	<u>CIAT</u>	<u>CIMMYT</u>	<u>CIP</u>	<u>ICRISAT</u>	<u>IITA</u>	<u>IRRI</u>	<u>ILRAD</u>	<u>ILCA</u>	<u>Genes</u>	<u>WARDA</u>	<u>Unallocated</u>
Australia	.100						.100					
Belgium	.390					.310			.025		.045	.010
Canada	4.685	.755	.550	.320	1.805 <sup>a/</sup>	.755		.400			.100	
Denmark	.370		.150	.200					.020			
Ford	3.000	.750	.750			.750	.750					
France	.125								.100		.025	
Germany	2.845		.345 <sup>b/</sup>	.135 <sup>c/</sup>	.435	.655		.365	.365	.035		.510
IDB	2.000	1.000	.750	.250								
IDRC	.930		.050		.275		.355	.100	.150			
Japan	.270						.270					
Kellogg	.280	.280										
Netherlands	.605	.125		.180		.125		.050		.050	.075	
Norway	.430				.190							.240
Rockefeller	3.100	.750	.750	.150		.550	.700	.100		.100		
Sweden	1.625			.215	1.220				.105	.085		
Switzerland	.290	.070		.070	.150							
U. K.	2.015	.055	.005	.110	.400	.570	.430	.230	.090	.055	.015	.055
UNDP	1.450		.700		.650			.050	.050			
U. S.	7.000	.950	1.350	.550	1.000	1.500	1.100	.330	.100		.110	.010
World Bank	3.200	.275	.200			.250	.580				.095	1.800
Available	34.710	5.010	5.600	2.180	6.125	5.465 <sup>d/</sup>	4.285	1.625	1.005	.325	.465	
Required		5.310	5.600 <sup>e/</sup>	2.245	5.600	6.325 <sup>d/</sup>	4.825 <sup>f/</sup>	1.625	1.005	.325		
Net		-.300 <sup>1620</sup>	-	-.065	+0.525	-.860	-.540	-	-	-		

a/ Includes \$800,000 available in 1973.

b/ Includes \$160,000 made available in 1973.

c/ Bilateral funds applicable to core program.

d/ Not taking account of carryover from 1973 and 1973 funds not delivered until 1974.

e/ See also Mr. Hanson's letters of January 11 and February 4, 1974.

f/ Adjusted in response to Dr. Brady's cable of April 29, 1974.

May 3, 1974

Currency values as of  
January 2, 1974

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523

ASSISTANT  
ADMINISTRATOR

May 15, 1974

Mr. Harold Graves  
Executive Secretary  
Consultative Group on International  
Agriculture Research  
IBRD  
1818 H Street, N. W.  
Washington, D. C. 20433

Dear Harold:

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Upon Dr. Guy Baird's return early next week he will discuss with you the apportionment.

Sincerely,

  
Joel Bernstein

STATE - A.I.D. - USIA  
ROUTING SLIP

DATE  
4/28

TO:

	Name or Title	Urgen. Symbol	Room No.	Blgd.	Initials	Date
1.	<del>S. Kelly</del>				SK	4/29/74
2.	S.C. Litzewerger				SK	4/30
3.	G. Baird - for files					
4.						
5.						

Approval	<input checked="" type="checkbox"/>	For Your Information	None and Return
As Requested	<input type="checkbox"/>	Initial for Clearance	Per Conversation
Comment	<input type="checkbox"/>	Investigate	Prepare Reply
File	<input type="checkbox"/>	Justify	See Me
For Correction	<input type="checkbox"/>	Necessary Action	Signature

REMARKS OR ADDITIONAL ROUTING

The International Board on Plant  
Genetics Resources (supported by GARR)  
is scheduled to have its first meeting  
in June. All <sup>known</sup> members (see attached)  
accepted. It will be a good board and  
have a very important role. We  
are not providing support for 1974  
but may need to thereafter.  
Any comments?

FROM: (Name and Org. Symbol)

G. Baird

ROOM NO. & BLDG.

PHONE NO.



CGIAR

DDDR:IAR/74/19  
March, 1974

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

SUBCOMMITTEE ON GENETIC RESOURCES

Second Meeting

Rome, Italy, 6-7 February 1974

DRAFT  
REPORT

TAC SECRETARIAT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome

1974

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

SUBCOMMITTEE ON GENETIC RESOURCES

Second Meeting

Rome, Italy, 6-7 February 1974

DRAFT  
REPORT

1. The second meeting of the Subcommittee on Genetic Resources of the Consultative Group on International Agricultural Research (CGIAR) was held at the headquarters of FAO in Rome on 6-7 February 1974. Mr. R.H. Demuth, Chairman of the Subcommittee, was in the Chair.

2. The meeting was attended by representatives of eight governments, international agencies and private foundations, all members of CGIAR. The Secretariat was provided by FAO and by the Secretariat of CGIAR. A list of the participants is attached as Appendix I.

3. A list of documents provided to the Subcommittee is attached as Appendix II. The agenda as adopted is attached as Appendix III.

4. A statement was presented by Dr. F. Albani, Director of FAO's Plant Production and Protection Division, on the operations of the Crop Ecology and Genetic Resources Unit since the first Subcommittee meeting in October 1973. A similar statement was presented by Mr. R.L. Willan, of FAO's Forest Resources Division, on the activities of the Forest Management Branch.

Election of Members of the International Board for Plant Genetic Resources

5. The Chairman and members thanked Dr. de Bakker and Professor Bunting, who had served as a Nominations Working Group for the Subcommittee, for soliciting the nomination of a large number of well-qualified candidates for membership on the International Board for Plant Genetic Resources (hereinafter called "the Board") and for compiling, in consultation with the Rockefeller Foundation and FAO, a short list of candidates for consideration by the Subcommittee.

6. The criteria adopted by the Subcommittee for election of members of the Board were as follows: qualifications as scientists or research administrators; representation of different geographical regions and disciplines; and appropriate representation of both donor governments and agencies and of developing nations.

7. Application of these criteria resulted in election of the following members to the Board, subject to their willingness to serve:

- P. Bouvarel France  
Chief, Department of Forestry Research, National  
Institute of Agronomic Research, Champenoux, Einville
- D.D. Brezhnev U.S.S.R.  
Director, N.I. Vavilov All-Union Scientific  
Research Institute of Plant Industry, Leningrad
- A.H. Bunting U.K.  
Professor, Department of Agricultural Development  
Overseas, University of Reading, Reading
- G. de Bakker Netherlands  
General Director, Agricultural Research, Ministry  
of Agriculture and Fisheries, The Hague
- J.L. Creech U.S.A.  
Director, National Arboretum, Agricultural Research  
Service, Northeastern Region, U.S. Department of  
Agriculture, Washington, D.C.
- G. Fischbeck Fed. Rep. of  
Germany  
Professor, Institut für Pflanzenbau und  
Pflanzenzüchtung, Technische Universität München,  
8050 Freising-Weihenstephan
- A.B. Joshi India  
Director, Indian Agricultural Research Institute,  
New Delhi
- L. Kåhre Sweden  
Director, Swedish State Seed Testing Institute,  
S-17173 Solna
- W.F. Kugler Argentina  
Professor, Faculty of Agronomy, University of  
La Plata, Buenos Aires
- B. Majisu Kenya  
Director, East African Agricultural and Forestry  
Research Organization (EAAFRRO), Kikuyu
- Setijati Sastrapradja Indonesia  
Director, National Biological Institute, Bogor
- L.M. Roberts Rockefeller  
Foundation  
Associate Director, Agricultural Sciences  
Program, The Rockefeller Foundation, New York
- V. Tayşi Turkey  
Professor, Department of Agroecology and General  
Plant Breeding, Ege University, Izmir

8. The Subcommittee was advised that FAO would be represented on the Board by the Director of the Plant Production and Protection Division, Dr. F. Albani.

9. It was agreed that, in the event of elected members being unable to serve, a Planning Committee, consisting of Messrs. Bunting, de Bakker and Roberts, would make recommendations on appropriate substitutions and submit them to the Subcommittee for approval by mail vote.



#### Term of Board members

10. It was agreed that the normal term of membership on the Board should be for three years, timed to coincide with the fiscal year of CGIAR, i.e. from 1 January to 31 December. In the case of the initial Board, however, four members would be selected by lot to serve until 31 December 1975; four members would be similarly selected to serve until 31 December 1976; and the term of the remaining members would run to 31 December 1977. It was further agreed that members should be eligible to serve for a maximum of two consecutive terms on the Board. This would not however preclude subsequent election after a period of non-membership. All vacancies are to be filled by CGIAR, acting on the recommendation of the Board.

#### Functioning of the Board

11. In considering the way in which the Board would operate, members of the Subcommittee expressed the view that it should enjoy the same degree of autonomy as enjoyed by the international agricultural research centres sponsored by CGIAR. Note was taken that the Board would be required to submit information reports and a proposed budget to the Technical Advisory Committee (TAC) of CGIAR and to CGIAR itself, and to make a presentation at International Centres Week in the same manner as the international centres do. TAC would make such comments to CGIAR on the work programme of the Board as it believes appropriate and CGIAR would, in turn, decide how much financing for the Board and its operations would be included in the programme approved by CGIAR for implementation by its members.

12. Members of the Subcommittee expressed the view that flexible interpretation of the terms of reference of the Board would facilitate its evolution as a world centre of intellectual leadership in genetic resources. As such, the Board should be in a position to help coordinate the activities of the many international, regional and national institutions engaged in genetic resources work and to mobilize increased support for such activities, including exploration, conservation, classification and documentation, utilization and training. The Board would be expected to establish priorities for the funding of these various activities and with the assistance of FAO, to promote appropriate collaborative arrangements between all types of institutes and to link them together into an effective global network. The actual funding would primarily be provided by donors on a bilateral basis, and, in addition, it was expected that members of CGIAR would put some funds directly into a central fund which would be at the disposition of the Board, thus enabling it to finance some activities directly.

#### Administration of funds contributed directly to the proposed central fund of the Board

13. During its consideration of how funds provided for the proposed central fund of the Board might best be administered, the Subcommittee was advised that, if the device of an FAO trust fund were used for this purpose, FAO would, as an exception, waive any charge for administration of the trust fund during 1974. This decision was without prejudice to the position for 1975 and subsequent years, which would be determined at a later date. Members expressed their appreciation to FAO for this waiver and agreed that, in view of the waiver, administration of contributions made to the proposed central fund should be entrusted to FAO. It was further agreed that the Board should in general pay for any special services which it might request from FAO and reimburse FAO for all costs, including overhead, for field projects which it might ask FAO to execute for it.



#### Secretariat for the Board

14. The Subcommittee noted with appreciation that the 1973 FAO Conference had endorsed the provision of the Board's Secretariat by FAO and had agreed that the headquarters of the Board should be at FAO headquarters.

15. The Subcommittee approved, in general, the arrangements proposed by FAO for providing a Secretariat for the Board. Those arrangements contemplated that Mr. R.J. Pichel, Chief of the Crop Ecology and Genetic Resources Unit of the Plant Production and Protection Division, should act as Secretary to the Board with Mr. J.T. Sykes, an agricultural officer in the Unit, having continuing responsibility for servicing the Board as its Assistant Secretary. In addition, the expertise of the Unit would be made available to the Board. These Secretariat services would be provided without charge to the Board, which would, however, be expected to pay the costs of Board meetings, of a secretary and direct operating costs, such as cables and travel. The Secretariat, supplemented as necessary by FAO or the Board, would have the power of independent action in autonomously servicing the many needs of the Board. Appropriate modifications or additions to these arrangements for the Secretariat could be made if and as required.

#### Other relationships with FAO

16. Assurance was provided by FAO that priorities as recommended by the Board would be observed to the maximum practicable extent in formulating the programmes of the Crop Ecology and Genetic Resources Unit. The Board's recommendations would be directed of course to many different organizations and governments. However, in the particular case of FAO, close juxtaposition and maximum consultation should ensure that the FAO Regular Programme activities and those recommended by the Board were implemented to the mutual satisfaction of FAO and the Board. Furthermore, the recommendations of the FAO Panels of Experts, on Plant Exploration and Introduction, and on Forest Gene Resources, would be conveyed to the Board.

#### Start-up arrangements

17. It was agreed that the request to donor members of CGIAR for contributions to the FAO trust fund which is to constitute the central fund for the Board (see para 13) would come from the Executive Secretary of CGIAR, on the advice of the Chairman of the Subcommittee. The Subcommittee noted the importance that funds be made available promptly in order to finance the first Board meeting.

18. Members selected for the initial Board would be advised of their election by the Chairman of the Subcommittee.

19. Pledges made by donors at the November 1973 meeting of CGIAR in Washington were confirmed, namely \$335,000 of support by five donors for 1974. Three other donors indicated willingness in principle to provide funds for subsequent years. In addition, German support for centres in Ethiopia and Costa Rica was confirmed, and UNDP stated its agreement in principle to supporting genetic resources work at the Izmir Centre in Turkey and appropriate programmes in the U.S.S.R., if recommended by the Board.

20. It was agreed that the Planning Committee (see para 9) should make arrangements for the first meeting of the Board, consult with the Director-General of FAO regarding the Board Chairmanship and, in consultation with the legal and financial officials of FAO, formulate suitable arrangements for the creation of an appropriate FAO trust fund.

Chairmanship

21. The representative of UNDP, supported by the representatives of the Federal Republic of Germany and of the United States, proposed inclusion in the minutes of the following statement which received the unanimous support of the meeting:

"Under the procedures adopted by this Subcommittee which were endorsed by CGIAR at its meeting in November 1973, the Chairman of the Board will be elected by the members of the Board in consultation with the Director-General of FAO. It is our considered view that it would be in the best interests of all parties concerned, if the Board, once it is constituted, were to give consideration to elect as its chairman, Mr. Richard H. Demuth. While we have no intention of committing the Board to any specific course of action nor to limit it in its action, we hope that it, in consultation with the Director-General of FAO, will take advantage of the outstanding qualities of Mr. Demuth and elect him as the Board's Chairman. We make this statement with no other intention than that of expressing our joint confidence that Mr. Demuth, by virtue of his long experience and skill, will make a major contribution to the work of this most important undertaking".

22. The Subcommittee adjourned, sine die, with the understanding that, if necessary, it might be reconvened by CGIAR.



LIST OF PARTICIPANTS

Members:

Chairman: Mr. R.H. Demuth  
Partner, Surrey, Karasik & Morse  
1156 15th Street, N.W.  
Washington, D.C. 20005  
U.S.A.

FAO

Dr. F. Albani  
Director  
Plant Production and Protection  
Division

GERMANY, Federal Republic of

Dr. W. Treitz  
Ministerialat  
Bundesministerium für Wirtsch  
Zusammenarbeit  
Bonn

NETHERLANDS

Dr. G. de Bakker  
General Director  
Agricultural Research  
Ministry of Agriculture and  
Fisheries  
1e van den Boschstr. 4  
The Hague

ROCKEFELLER FOUNDATION

Dr. L.M. Roberts  
Associate Director  
Agricultural Sciences Program  
The Rockefeller Foundation  
111 West 50th Street  
New York, N.Y. 10020  
U.S.A.

SWEDEN

Prof. L. Kåhre  
Swedish State Seed Testing Institute  
S-17173 Solna

Mr. E. Cornell  
Permanent Representative of Sweden  
to FAO  
Swedish Embassy  
Rome

UNITED KINGDOM

Prof. A.H. Bunting  
Department of Agricultural Development  
Overseas  
University of Reading  
Whiteknights  
Reading, Berkshire

UNDP

Mr. W.T. Mashler  
Director  
Division for Global and Interregional  
Projects  
United Nations Development Programme  
866 United Nations Plaza  
New York, N.Y. 10017  
U.S.A.

UNITED STATES OF AMERICA

Dr. G.B. Baird  
Associate Director (Research)  
Office of Agriculture  
Technical Assistance Bureau  
Agency for International Development  
State Department  
Washington, D.C.

Secretary:

Mr. B.M. Cheek  
Deputy Executive Secretary  
Consultative Group on International  
Agricultural Research  
c/o IBRD  
Washington

Assistant Secretary:

Mr. J.T. Sykes  
Agricultural Officer  
Crop Ecology and Genetic Resources  
Unit  
Plant Production and Protection  
Division  
FAO

Observers:

CANADA

Mr. H.E. Ryan  
Permanent Representative of  
Canada to FAO  
Canadian Embassy  
Via G.B. de Rossi  
Rome

IBRD

Mr. J.M. Fransen  
Agricultural Research Adviser  
International Bank for  
Reconstruction and Development  
1818 H. Street, N.W.  
Washington, D.C. 20433

FAO

Mr. A.J. Bronsema  
Director  
Financial Services Division

Mr. R.J. Pichel  
Chief, Crop Ecology and Genetic  
Resources Unit  
Plant Production and Protection  
Division

Dr. J. León  
Senior Plant Materials Officer  
Crop and Grassland Production  
Service  
Plant Production and Protection  
Division

Mr. R.L. Willan  
Chief, Afforestation Section  
Forest Management Branch  
Forest Resources Division

APPENDIX II

LIST OF DOCUMENTS

1. DDDR:IAR/73/31 Report of the first meeting of the Subcommittee on Genetic Resources, Rome, 1-2 October 1973.
2. DDDR:IAR/74/2 Provisional agenda for second meeting of Subcommittee on Genetic Resources, Rome, 6-8 February 1974.
3. DDDR:IAR/74/13 Operation of FAO Trust Funds.
4. DDDR:IAR/74/11 Staffing and servicing the Secretariat of the International Board for Plant Genetic Resources and its relations with FAO's Crop Ecology and Genetic Resources Unit.
5. Working paper on candidates for the International Board for Plant Genetic Resources.
6. Supplementary biographical data of candidates.

APPENDIX III

AGENDA

1. Adoption of the agenda.
2. Constitution of the International Board for Plant Genetic Resources:
  - a) Discussion of recommendations from Nominations Working Group;
  - b) Election by Subcommittee of Board members selected from short list.
3. Discussion of arrangements for funding operations: proposal for FAO trust fund.
4. Discussion of staffing arrangements for servicing the Secretariat of the International Board and its relations with FAO's Unit of Crop Ecology and Genetic Resources.
5. Decision on provision of start-up funds for establishment and initial operations of Board in 1974.
6. Date and place of first meeting of the Board and procedures for initiating its operations.



File - CGIAR 1974

DDDR:IAR/74/19  
March, 1974

*Not classified by AID*

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

SUBCOMMITTEE ON GENETIC RESOURCES

Second Meeting

Rome, Italy, 6-7 February 1974

DRAFT  
REPORT

TAC SECRETARIAT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome

1974

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
SUBCOMMITTEE ON GENETIC RESOURCES

Second Meeting

Rome, Italy, 6-7 February 1974

DRAFT  
REPORT

1. The second meeting of the Subcommittee on Genetic Resources of the Consultative Group on International Agricultural Research (CGIAR) was held at the headquarters of FAO in Rome on 6-7 February 1974. Mr. R.H. Demuth, Chairman of the Subcommittee, was in the Chair.
2. The meeting was attended by representatives of eight governments, international agencies and private foundations, all members of CGIAR. The Secretariat was provided by FAO and by the Secretariat of CGIAR. A list of the participants is attached as Appendix I.
3. A list of documents provided to the Subcommittee is attached as Appendix II. The agenda as adopted is attached as Appendix III.
4. A statement was presented by Dr. F. Albani, Director of FAO's Plant Production and Protection Division, on the operations of the Crop Ecology and Genetic Resources Unit since the first Subcommittee meeting in October 1973. A similar statement was presented by Mr. R.L. Willan, of FAO's Forest Resources Division, on the activities of the Forest Management Branch.

Election of Members of the International Board for Plant Genetic Resources

5. The Chairman and members thanked Dr. de Bakker and Professor Bunting, who had served as a Nominations Working Group for the Subcommittee, for soliciting the nomination of a large number of well-qualified candidates for membership on the International Board for Plant Genetic Resources (hereinafter called "the Board") and for compiling, in consultation with the Rockefeller Foundation and FAO, a short list of candidates for consideration by the Subcommittee.
6. The criteria adopted by the Subcommittee for election of members of the Board were as follows: qualifications as scientists or research administrators; representation of different geographical regions and disciplines; and appropriate representation of both donor governments and agencies and of developing nations.
7. Application of these criteria resulted in election of the following members to the Board, subject to their willingness to serve:

- P. Bouvarel  
Chief, Department of Forestry Research, National  
Institute of Agronomic Research, Champenoux, Einville  
France
- D.D. Brezhnev  
Director, N.I. Vavilov All-Union Scientific  
Research Institute of Plant Industry, Leningrad  
U.S.S.R.
- A.H. Bunting  
Professor, Department of Agricultural Development  
Overseas, University of Reading, Reading  
U.K.
- G. de Bakker  
General Director, Agricultural Research, Ministry  
of Agriculture and Fisheries, The Hague  
Netherlands
- J.L. Creech  
Director, National Arboretum, Agricultural Research  
Service, Northeastern Region, U.S. Department of  
Agriculture, Washington, D.C.  
U.S.A.
- G. Fischbeck  
Professor, Institut für Pflanzenbau und  
Pflanzenzüchtung, Technische Universität München,  
8050 Freising-Weißenstephan  
Fed. Rep. of  
Germany
- A.B. Joshi  
Director, Indian Agricultural Research Institute,  
New Delhi  
India
- L. Kåhre  
Director, Swedish State Seed Testing Institute,  
S-17173 Solna  
Sweden
- W.F. Kugler  
Professor, Faculty of Agronomy, University of  
La Plata, Buenos Aires  
Argentina
- B. Majisu  
Director, East African Agricultural and Forestry  
Research Organization (EAAFRRO), Kikuyu  
Kenya
- Setijati Sastrapradja  
Director, National Biological Institute, Bogor  
Indonesia
- L.M. Roberts  
Associate Director, Agricultural Sciences  
Program, The Rockefeller Foundation, New York  
Rockefeller  
Foundation
- V. Tayşi  
Professor, Department of Agroecology and General  
Plant Breeding, Ege University, Izmir  
Turkey

8. The Subcommittee was advised that FAO would be represented on the Board by the Director of the Plant Production and Protection Division, Dr. F. Albani.

9. It was agreed that, in the event of elected members being unable to serve, a Planning Committee, consisting of Messrs. Bunting, de Bakker and Roberts, would make recommendations on appropriate substitutions and submit them to the Subcommittee for approval by mail vote.



#### Term of Board members

10. It was agreed that the normal term of membership on the Board should be for three years, timed to coincide with the fiscal year of CGIAR, i.e. from 1 January to 31 December. In the case of the initial Board, however, four members would be selected by lot to serve until 31 December 1975; four members would be similarly selected to serve until 31 December 1976; and the term of the remaining members would run to 31 December 1977. It was further agreed that members should be eligible to serve for a maximum of two consecutive terms on the Board. This would not however preclude subsequent election after a period of non-membership. All vacancies are to be filled by CGIAR, acting on the recommendation of the Board.

#### Functioning of the Board

11. In considering the way in which the Board would operate, members of the Subcommittee expressed the view that it should enjoy the same degree of autonomy as enjoyed by the international agricultural research centres sponsored by CGIAR. Note was taken that the Board would be required to submit information reports and a proposed budget to the Technical Advisory Committee (TAC) of CGIAR and to CGIAR itself, and to make a presentation at International Centres Week in the same manner as the international centres do. TAC would make such comments to CGIAR on the work programme of the Board as it believes appropriate and CGIAR would, in turn, decide how much financing for the Board and its operations would be included in the programme approved by CGIAR for implementation by its members.

12. Members of the Subcommittee expressed the view that flexible interpretation of the terms of reference of the Board would facilitate its evolution as a world centre of intellectual leadership in genetic resources. As such, the Board should be in a position to help coordinate the activities of the many international, regional and national institutions engaged in genetic resources work and to mobilize increased support for such activities, including exploration, conservation, classification and documentation, utilization and training. The Board would be expected to establish priorities for the funding of these various activities and with the assistance of FAO, to promote appropriate collaborative arrangements between all types of institutes and to link them together into an effective global network. The actual funding would primarily be provided by donors on a bilateral basis, and, in addition, it was expected that members of CGIAR would put some funds directly into a central fund which would be at the disposition of the Board, thus enabling it to finance some activities directly.

#### Administration of funds contributed directly to the proposed central fund of the Board

13. During its consideration of how funds provided for the proposed central fund of the Board might best be administered, the Subcommittee was advised that, if the device of an FAO trust fund were used for this purpose, FAO would, as an exception, waive any charge for administration of the trust fund during 1974. This decision was without prejudice to the position for 1975 and subsequent years, which would be determined at a later date. Members expressed their appreciation to FAO for this waiver and agreed that, in view of the waiver, administration of contributions made to the proposed central fund should be entrusted to FAO. It was further agreed that the Board should in general pay for any special services which it might request from FAO and reimburse FAO for all costs, including overhead, for field projects which it might ask FAO to execute for it.



### Secretariat for the Board

14. The Subcommittee noted with appreciation that the 1973 FAO Conference had endorsed the provision of the Board's Secretariat by FAO and had agreed that the headquarters of the Board should be at FAO headquarters.

15. The Subcommittee approved, in general, the arrangements proposed by FAO for providing a Secretariat for the Board. Those arrangements contemplated that Mr. R.J. Pichel, Chief of the Crop Ecology and Genetic Resources Unit of the Plant Production and Protection Division, should act as Secretary to the Board with Mr. J.T. Sykes, an agricultural officer in the Unit, having continuing responsibility for servicing the Board as its Assistant Secretary. In addition, the expertise of the Unit would be made available to the Board. These Secretariat services would be provided without charge to the Board, which would, however, be expected to pay the costs of Board meetings, of a secretary and direct operating costs, such as cables and travel. The Secretariat, supplemented as necessary by FAO or the Board, would have the power of independent action in autonomously servicing the many needs of the Board. Appropriate modifications or additions to these arrangements for the Secretariat could be made if and as required.

### Other relationships with FAO

16. Assurance was provided by FAO that priorities as recommended by the Board would be observed to the maximum practicable extent in formulating the programmes of the Crop Ecology and Genetic Resources Unit. The Board's recommendations would be directed of course to many different organizations and governments. However, in the particular case of FAO, close juxtaposition and maximum consultation should ensure that the FAO Regular Programme activities and those recommended by the Board were implemented to the mutual satisfaction of FAO and the Board. Furthermore, the recommendations of the FAO Panels of Experts, on Plant Exploration and Introduction, and on Forest Gene Resources, would be conveyed to the Board.

### Start-up arrangements

17. It was agreed that the request to donor members of CGIAR for contributions to the FAO trust fund which is to constitute the central fund for the Board (see para 13) would come from the Executive Secretary of CGIAR, on the advice of the Chairman of the Subcommittee. The Subcommittee noted the importance that funds be made available promptly in order to finance the first Board meeting.

18. Members selected for the initial Board would be advised of their election by the Chairman of the Subcommittee.

19. Pledges made by donors at the November 1973 meeting of CGIAR in Washington were confirmed, namely \$335,000 of support by five donors for 1974. Three other donors indicated willingness in principle to provide funds for subsequent years. In addition, German support for centres in Ethiopia and Costa Rica was confirmed, and UNDP stated its agreement in principle to supporting genetic resources work at the Izmir Centre in Turkey and appropriate programmes in the U.S.S.R., if recommended by the Board.

20. It was agreed that the Planning Committee (see para 9) should make arrangements for the first meeting of the Board, consult with the Director-General of FAO regarding the Board Chairmanship and, in consultation with the legal and financial officials of FAO, formulate suitable arrangements for the creation of an appropriate FAO trust fund.

Chairmanship

21. The representative of UNDP, supported by the representatives of the Federal Republic of Germany and of the United States, proposed inclusion in the minutes of the following statement which received the unanimous support of the meeting:

"Under the procedures adopted by this Subcommittee which were endorsed by CGIAR at its meeting in November 1973, the Chairman of the Board will be elected by the members of the Board in consultation with the Director-General of FAO. It is our considered view that it would be in the best interests of all parties concerned, if the Board, once it is constituted, were to give consideration to elect as its chairman, Mr. Richard H. Demuth. While we have no intention of committing the Board to any specific course of action nor to limit it in its action, we hope that it, in consultation with the Director-General of FAO, will take advantage of the outstanding qualities of Mr. Demuth and elect him as the Board's Chairman. We make this statement with no other intention than that of expressing our joint confidence that Mr. Demuth, by virtue of his long experience and skill, will make a major contribution to the work of this most important undertaking".

22. The Subcommittee adjourned, sine die, with the understanding that, if necessary, it might be reconvened by CGIAR.



LIST OF PARTICIPANTS

Members:

Chairman: Mr. R.H. Demuth  
Partner, Surrey, Karasik & Morse  
1156 15th Street, N.W.  
Washington, D.C. 20005  
U.S.A.

FAO  
Dr. F. Albani  
Director  
Plant Production and Protection  
Division

GERMANY, Federal Republic of  
Dr. W. Treitz  
Ministerialat  
Bundesministerium für Wirtsch  
Zusammenarbeit  
Bonn

NETHERLANDS  
Dr. G. de Bakker  
General Director  
Agricultural Research  
Ministry of Agriculture and  
Fisheries  
le van den Boschstr. 4  
The Hague

ROCKEFELLER FOUNDATION  
Dr. L.M. Roberts  
Associate Director  
Agricultural Sciences Program  
The Rockefeller Foundation  
111 West 50th Street  
New York, N.Y. 10020  
U.S.A.

SWEDEN  
Prof. L. Kåhre  
Swedish State Seed Testing Institute  
S-17173 Solna

Mr. E. Cornell  
Permanent Representative of Sweden  
to FAO  
Swedish Embassy  
Rome

UNITED KINGDOM  
Prof. A.H. Bunting  
Department of Agricultural Development  
Overseas  
University of Reading  
Whiteknights  
Reading, Berkshire

UNDP  
Mr. W.T. Mashler  
Director  
Division for Global and Interregional  
Projects  
United Nations Development Programme  
866 United Nations Plaza  
New York, N.Y. 10017  
U.S.A.

UNITED STATES OF AMERICA  
Dr. G.B. Baird  
Associate Director (Research)  
Office of Agriculture  
Technical Assistance Bureau  
Agency for International Development  
State Department  
Washington, D.C.

Secretary:  
Mr. B.M. Cheek  
Deputy Executive Secretary  
Consultative Group on International  
Agricultural Research  
c/o IBRD  
Washington

Assistant Secretary:  
Mr. J.T. Sykes  
Agricultural Officer  
Crop Ecology and Genetic Resources  
Unit  
Plant Production and Protection  
Division  
FAO

Observers:

CANADA

Mr. H.E. Ryan  
Permanent Representative of  
Canada to FAO  
Canadian Embassy  
Via G.B. de Rossi  
Rome

IBRD

Mr. J.M. Fransen  
Agricultural Research Adviser  
International Bank for  
Reconstruction and Development  
1818 H. Street, N.W.  
Washington, D.C. 20433

FAO

Mr. A.J. Bronsema  
Director  
Financial Services Division

Mr. R.J. Pichel  
Chief, Crop Ecology and Genetic  
Resources Unit  
Plant Production and Protection  
Division

Dr. J. León  
Senior Plant Materials Officer  
Crop and Grassland Production  
Service  
Plant Production and Protection  
Division

Mr. R.L. Willan  
Chief, Afforestation Section  
Forest Management Branch  
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APPENDIX II

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6. Date and place of first meeting of the Board and procedures for initiating its operations.



CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address - INTBAFRAD

*Boyd*  
*4/10*

June 18, 1974

Dear Dr. Bernstein:

For your archives, here is a signature copy of the Memorandum of Understanding under which an initial fund has been established for the International Livestock Center for Africa (ILCA).

It was originally intended that Belgium would be a signatory of this Memorandum, and Belgium indeed will contribute to the financing of ILCA. It appears, however, that procedural complications will delay for a considerable time longer the moment when Belgium would be in a position to sign the Memorandum. Since the document is effective without the Belgian signature, we have decided to dispense with that signature and to distribute the document to the other signatories now.

Sincerely yours,

*Harold Graves*

Harold Graves  
Executive Secretary

Enclosure

Dr. Joel Bernstein  
Assistant Administrator  
Technical Assistance Bureau  
United States Agency for  
International Development  
320 - 21st Street, N. W.  
Washington, D. C. 20523

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# Memorandum of Understanding

(ILCA Project)

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## Memorandum of Understanding

**MEMORANDUM** between the states and institutions hereinafter specified.

I. (a) Certain states and organizations (whose names are listed in Appendix I hereto) have organized a group entitled the Consultative Group on International Agricultural Research (the Consultative Group) for the purpose of sponsoring research programs designed to raise the quantity and quality of agricultural production in developing countries.

(b) The Consultative Group has authorized the establishment of an *ad hoc* African Livestock Subcommittee (the Subcommittee) to prepare and examine the feasibility of livestock research programs for tropical Africa and to arrange for the implementation of the initial stage of any agreed proposal. The Subcommittee is composed of representatives from the Governments of Belgium, Canada, Denmark, France, Germany, the Netherlands, Sweden, the United Kingdom, the United States, and from the European Economic Community, the Food and Agriculture Organization of the United Nations, the Ford Foundation, the International Bank for Reconstruction and Development (the Bank), the International Development Research Centre, The Rockefeller Foundation, the United Nations Development Programme, and others as may be agreed upon by the Chairman of the Consultative Group or his designee acting in such capacity.

II. (a) Early in 1972, the Subcommittee commissioned a Task Force under the leadership of Professor D. E. Tribe to examine the broad issues of animal production research in tropical Africa. On September 30, 1972 the Task Force submitted its report with the proposal (hereinafter called the Proposal), to establish an international center for ani-





mal production in Africa, subsequently referred to as the International Livestock Center for Africa (ILCA). This Memorandum of Understanding sets forth the basis on which the parties hereto are prepared to make contributions for the implementation of the Proposal.

(b) The Subcommittee has requested (as recorded in the excerpt from the Minutes of the Subcommittee of August 1, 1973, attached as Appendix II hereto) the Bank to act as agent in carrying out the Initial Stage of the Proposal (a description of which is contained in the Appendix III hereto) and to that end to enlist the cooperation of the International Development Research Centre pursuant to arrangements to be made between them.

(c) The states and institutions listed below (the Initial Donors) have agreed to contribute the respective amounts hereinafter specified for the implementation of the Initial Stage of the Proposal.

#### List of Initial Donors

Initial Donors	Amount of each Contribution
Belgium	BF 2,000,000
Denmark	DKr 120,000
France	US\$ 100,000
Germany	DM 1,000,000
International Development Association	US\$ 100,000
International Development Research Centre	Can\$ 150,000
Sweden	SKr 500,000
United Kingdom	£ 40,000
United Nations Development Programme	US\$ 50,000
United States	US\$ 100,000

The amount of funds subject to this Memorandum of Understanding may be increased at any time by additional contributions from the Initial Donors, or by contributions from any member of the Consultative Group acceding to this Memorandum of Understanding.

(d) The Bank has agreed to the request described above, and, to that end, it has agreed to establish and administer a special account (the Account), consisting of the contributions of Donors, and to apply the proceeds of such contributions, in accordance with the provisions of the ILCA Special Account Regulation attached hereto as Appendix IV and made part of this Memorandum of Understanding. That Regulation is acceptable to the Donors.

(e) Payment by each Initial Donor of the amount due from it will be made to the Bank within 90 days after signature by such Initial Donor of this Memorandum of Understanding or such other date as may be agreed upon by the Bank and such Initial Donor.

(f) This Memorandum of Understanding shall become effective when it shall have been signed by at least four Donors.

(g) Any member of the Consultative Group may accede to this Memorandum of Understanding by sending notice in writing to the Bank and making a payment to the Bank for transmission to the Account. The Bank shall promptly inform all other parties to this Memorandum of Understanding of any such accession.

IN WITNESS WHEREOF the parties hereto, acting through their representatives thereunto duly authorized, have signed the present Memorandum of Understanding in the District of Columbia, as of the respective dates hereinafter indicated.

**Initial Donors:**

KINGDOM OF BELGIUM

By

Date



KINGDOM OF DENMARK

By *W. Staxhaus*

Date DECEMBER 3, 1973

REPUBLIC OF FRANCE

By *J. H. Wall*

Date DECEMBER 3, 1973

FEDERAL REPUBLIC OF GERMANY

By *Hans Jansen*

Date DECEMBER 3, 1973

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

By *Richard J. Hyman*

Date DECEMBER 3, 1973

INTERNATIONAL DEVELOPMENT  
RESEARCH CENTRE

By *James P. Papp*

Date MARCH 6, 1974

KINGDOM OF SWEDEN

By *Curt Ridgand*

Date FEBRUARY 19, 1974

UNITED KINGDOM OF GREAT BRITAIN  
AND NORTHERN IRELAND

By *Anthony Keith Lawrence*

Date JUNE 18, 1974

UNITED NATIONS DEVELOPMENT  
PROGRAMME

By *William Sullivan*

Date FEBRUARY 21, 1974

UNITED STATES OF AMERICA

By *David ...*

Date DECEMBER 3, 1973

**Executing Agent:**

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

By *Michael H. ...*

Date DECEMBER 3, 1973

**APPENDIX I****Members of Consultative Group on  
International Agricultural Research**

African Development Bank  
Asian Development Bank  
Australia  
Belgium  
Canada  
Denmark  
European Economic Community  
Food and Agriculture Organization of the United Nations  
Ford Foundation  
France  
Germany  
Inter-American Development Bank  
International Bank for Reconstruction and Development  
International Development Research Centre  
Japan  
Kellogg Foundation  
Netherlands  
Norway  
The Rockefeller Foundation  
Sweden  
Switzerland  
United Kingdom  
United Nations Development Programme  
United States



Representing Africa:<sup>1</sup>

Morocco

Nigeria

## Representing Asia and the Far East:

Philippines

Thailand

## Representing Latin America:

Argentina

Brazil

## Representing the Middle East:

Egypt

Pakistan

## Representing Southern and Eastern Europe:

Israel

Romania

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<sup>1</sup> The five major developing regions of the world participate in the Consultative Group through representatives designated for a two-year term by the membership of FAO. Each region has designated two countries which serve as member or alternate at their discretion.

**APPENDIX II**

**Excerpt from the Summary of Proceedings of the Meeting  
of the African Livestock Subcommittee of the  
Consultative Group on International Agricultural Research,  
held in Washington, D. C. on August 1, 1973.**

18. The Subcommittee confirmed that it wished the International Bank for Reconstruction and Development (World Bank) to act as Executing Agency to bring ILCA into being and to that end to enlist the cooperation of the International Development Research Centre (IDRC).

**APPENDIX III****Initial Stage of the Proposal**

The Initial Stage of the Proposal means those activities necessary to establish ILCA as an independent entity with the ability (when appropriately financed and fully staffed) to realize its mission of research and training. These activities may include but are not necessarily limited to the following:

- (a) Making of appropriate arrangements for the establishment and operation of ILCA with its host country;
- (b) The preparation, adoption, and registration of a charter, or constitution, with appropriate by-laws, or other documents necessary to assure the continued operation of ILCA as an independent legal entity with the authority required to achieve the objectives set forth in the Proposal;
- (c) The constitution of ILCA's Board of Trustees;
- (d) The selection and acquisition of a suitable site and suitable lands under long-term leases;
- (e) The recruitment and employment of a Director-General, initial staff, and temporary consultants;
- (f) The selection and purchase of necessary initial equipment and supplies and biological materials including livestock;
- (g) The initiation of planning for the research program;
- (h) Some initial development of research and experimentation; and
- (i) Initiating site and facility planning and site development, including engaging architectural services and making available temporary service buildings if necessary.



The Initial Stage financed under this Memorandum shall be considered to be completed when the Bank determines that ILCA has been established as a legal entity and has the capacity to make the arrangements necessary to realize its purpose, including the ability to conduct its administration and financial affairs, to carry out the procurement of equipment and materials, to keep accounts and inventories, all in accordance with sound administrative, financial and agricultural practices and under the supervision of qualified and experienced management assisted by competent staff. Upon making the before-mentioned determination, the Bank shall so notify the Subcommittee and shall submit a final report of its activities under this Memorandum, at which time its obligations under this Memorandum shall cease.

**APPENDIX IV**

**ILCA SPECIAL ACCOUNT REGULATION**

**ARTICLE I**

**The Account; Disbursements from the Account**

SECTION 1.01. The Bank shall open the Account on its books and shall credit thereto the proceeds of each Donor's contribution as the same shall from time to time be transferred to the Bank for the purpose of this Memorandum. All monies credited to the Account shall be used only for the purposes and in accordance with the provisions of this Memorandum.

SECTION 1.02. The Account and all monies credited thereto shall be held in trust and kept separate and apart from all other accounts and assets of the Bank.

SECTION 1.03. The Bank shall pay to or on the order of itself out of the monies in the Account for payments made or to be made after December 1, 1973 for the reasonable cost of goods and services required for the Initial Stage of the Proposal.

SECTION 1.04. The Bank shall send to each of the Donors a quarterly report containing appropriate information with respect to disbursements of, and balances in, the Account.

**ARTICLE II**

**Further Undertakings of the Bank**

SECTION 2.01. Amounts credited to the Account shall be used by the Bank exclusively to finance the cost of goods and services required to carry out the Initial Stage of the Proposal.

SECTION 2.02. The Bank shall provide and bear the cost of the services of its regularly employed professional and

support staff which it may from time to time provide to assist in carrying out the Initial Stage of the Proposal.

SECTION 2.03. The Bank shall keep the Chairman of the Consultative Group informed of the progress made in carrying out the Initial Stage of the Proposal and shall supply him with quarterly written reports.

SECTION 2.04. The Bank shall not incur obligations against the Account beyond the maximum amount of funds committed to the Account at any given time.

SECTION 2.05. Any monies remaining in the Account upon the completion of the Initial Stage of the Proposal shall be transferred to ILCA. However, if the Initial Stage of the Proposal shall be discontinued before its completion, any monies remaining in the Account shall be repaid by the Bank to the Donors *pro rata* to the amounts of their respective contributions, unless the Bank and any Donor shall agree otherwise with respect to the amount to be repaid to such Donor. In the event of such discontinuance, any physical assets other than monies shall be disposed of as the Donors shall direct.



CGIAR

JUN 12 1974

Mr. Harold Graves /  
Executive Secretary  
Consultative Group on International  
Agricultural Research  
1818 H Street, N. W.  
Washington, D. C. 20433

Subject: Election of New Member to Technical  
Advisory Committee (TAC)

Dear Mr. Graves:

Reference is made to your memorandum of June 5, 1974 on the  
above subject. You point out that the co-sponsors of the  
Consultative Group (UNDP, FAO and IBRD) recommend that  
Dr. Guy Camus, Director-General of ORSTOM, be elected to  
replace Dr. Pagot. We concur in this recommendation.

Sincerely yours,

Joel Bernstein

cc: TA/AGR:GBBaird



TA/AGR:OJKelley:meh:6/10/74

2 copies  
given to Baird

Kelley  
due NLT June 21

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address - INTBAFRAD

June 5, 1974

TO: Members of the Consultative Group  
FROM: Executive Secretariat  
SUBJECT: Election of New Member to Technical Advisory Committee (TAC)

The purpose of this memorandum is to request members of the Consultative Group to select, by mail vote, a new member of the Technical Advisory Committee for the unexpired portion of the term of Dr. Jean Pagot who has resigned from TAC following his appointment as Director-General-designate of the International Livestock Center for Africa (ILCA). Dr. Pagot's term was to end on December 31, 1975, and the person chosen in his place would be eligible to serve further on TAC, the normal term of appointment being three years.

The co-sponsors of the Consultative Group (UNDP, FAO and IBRD) recommend that Dr. Guy Camus, Director-General of ORSTOM, be elected in place of Dr. Pagot. Biographical information on Dr. Camus is attached, together with a list of the current membership of TAC.

Early action by members of the Consultative Group would be appreciated. To facilitate preparations for the next meeting of TAC, which begins in Washington on July 24, 1974, it is desirable that the votes of members be received by the Executive Secretary of the Consultative Group, Mr. Harold Graves, not later than June 21.

Attachments

6/6/74

GUY CAMUS

Born March 27, 1921

Doctor of Science, University of Paris

Assistant in the science faculty, University of Paris, 1944.

Rockefeller Fellow, 1949-52.

Leader of research team at the French National Center for Scientific Research, 1955.

Lecturer (1956-61) and professor (since 1961) in the science faculty of the University of Paris.

Member of the Board and of the National Committee for the National Center of Scientific Research, 1955 to present.

Director General of the Office de la recherche scientifique et technique d'outre-mer (ORSTOM), 1963 to present.

June 5, 1974



MEMBERS OF TAC

Terms Expiring December 31, 1974

Sir John Crawford (Economist) of Australia. Chairman

Ing. Manuel Elgueta (Agronomist), Ex-Director, Chilean Agricultural Research Institute; now working with IICA as Director of proposed Turrialba Research Corporation

Prof. Dr. Hassan Ali El-Tobgy (Geneticist), Regional Agricultural Adviser, The Ford Foundation, Beirut, Lebanon (previously Under-Secretary, Agriculture and Chairman, Research Committee, U.A.R.)

Dr. L. Sauger (Agronomist), Directeur, Centre de recherche agronomique du Bambey, Senegal

Terms Expiring December 31, 1975

Dr. W. D. Hopper (Economist), President, International Development Research Centre, Ottawa, Canada

Dr. T. Muriithi (Animal Health), Director, Veterinary Services, Nairobi, Kenya

Dr. J. Pagot (Animal Production), Ancien Directeur General, Institut d'elevage et de medecine veterinaire des pays tropicaux, Paris, France; now Director-General-designate, International Livestock Centre for Africa (ILCA), Ethiopia

Dr. N. Yamada (Doctor of Agriculture), Director, Research Institute for Tropical Agriculture, Tokyo, Japan

Prof. Dieter Bommer (Soil Scientist), Head, Institute for Plant Cultivation and Seed Research, Agricultural Research Center, Federal Republic of Germany

Terms Expiring December 31, 1976

Dr. V. W. Ruttan (Economist), President, Agricultural Development Council, New York

Dr. Luis Marcano (Agronomist), President, Shell Foundation, Venexuela

Dr. H. C. Pereira (Physicist), Chief Scientist, Ministry of Agriculture, Fisheries and Food, London, England

Dr. M. S. Swaminathan (Geneticist), Director, Indian Agricultural Research Institute, New Delhi, India

File - Inter Centers - 1974

~~Brady~~  
~~T. P. B.~~

Manila, February 26, 1974

TO THE DIRECTORS AND LEADERS OF THE WORLD NETWORK OF  
AGRICULTURAL RESEARCH CENTERS AT THEIR CONFERENCE AT  
C. I. A. T., March 1974

Gentlemen:

Since the objective of this intrusion into your conference is intended to advance the objectives to which you are committed, perhaps you will excuse it.

I have asked Director Brady of IRRI to deliver this note for whatever attention you think it should have.

I have now visited six of the nine centers since early January and intend to visit CIMMYT, CIAT, and CEP in the next few weeks.

Before retiring as Administrator of the U.S. Agency for International Development on October first, I welcomed the invitation from my successor, Dan Parker, to serve for a period as Consultant to him on matters pertaining to USAID relationships with your International Centers.

You know that I have been an active protagonist from the inception of the idea for the development of the entire system.

With the passage of time, I am increasingly convinced that if the hungry people in the poor countries of the world are to be fed in the decades immediately ahead, your centers will be one of the key potentials that could make it possible.

The disappearance of significant U.S. reserves of foodstuffs and the complications growing out of the Energy Crisis both in the LDC's and in the donor countries increase the importance of your achieving this potential.

A key question that I am sure you are at least as concerned about as I am is: - How are we to assure long-time financing for the entire network that will permit time to demonstrate the importance of the useful role that your centers can play if given the opportunity?

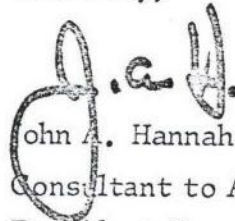
If we are to achieve this financing for at least the balance of this decade and hopefully longer we must be able to answer some of the questions that will certainly be asked, in a way that will convince those that will hold the purse strings that the centers merit the required support.

It is not suggested that you arrive at a consensus - but rather that you think about possible answers to questions like those attached.

You can undoubtedly improve on the wording of these questions. My concern is that we have answers that can be understood by harassed public officials - facing pressing and urgent demands that they do understand without enough resources to do all that they might like to do.

I will appreciate your advice and suggestions either collectively or individually offered.

Sincerely,

A handwritten signature in dark ink, appearing to read "J.A.H.", with a large, stylized initial "J" and "H".

John A. Hannah  
Consultant to Administrator, U.S. A.I. D.  
President Emeritus, Michigan State University

Best Address:  
P.O. Box 182  
Dansville, Michigan 48819



### A Tentative List of Questions

- A. Are the centers seriously looking at the social and economic systems - including the farming systems in which the small farmers in the poor countries must actually use the new crop varieties that you are developing - or the recommended farm practices that may be developed - to determine what the centers can do to make the recommended practices work better for these people?
- B. Are the centers looking at total food systems and how the centers can best improve them?
- C. Are the centers really seriously concerning themselves with increasing the use of their recommended practices by farmers?
- D. Can or should the centers be actively concerned with practical applications of the results of their efforts?
- E. How are the centers in fact relating their programs and efforts with others actively involved in trying to achieve lives of better quality for the poorest people in the poor countries?
- F. Do the centers actually believe that to be effective their programs must be related to more and better food for the poorest people in the poor countries in the years immediately ahead?
- G. Is it recognized by your staff members that the centers are only a means to an end - and not the end itself?
- H. Is the prior question always the accomplishment of progress toward a preconceived objective out of which progress in science or in career advancement may come and not the other way around - progress toward a unique advance in science or progress toward a personal career objective out of which may come some "fall out" that could advance progress toward the preconceived agreed upon objective?

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address - INTBAFRAD

JAN 11 1974

January 9, 1974

TO: Members of the Consultative Group, Directors of the  
International Agricultural Research Centers, Members  
of TAC

FROM: Executive Secretariat

SUBJECT: Center Review Procedures

1. On November 20, 1973, the Chairman of the Subcommittee on Center Review Procedures, Mr. David Bell, circulated a revised draft report of the Subcommittee for final comments by December 31, 1973. There have been no comments and the draft report should therefore be regarded as having the general agreement of Group members and as incorporating the procedures and practices to be applied with respect to the review of center operations. As indicated in Mr. Bell's cover note, the procedures themselves will be kept under review in the light of experience over the next year or so.

2. The attention of Center Directors is called particularly to paragraph 1 on page 2 of the Bell report. It calls for the Centers to furnish three documents in advance of International Centers Week: (1) a program-budget submission (now being discussed with the Centers by the Secretariat); (2) an annual report on research, training and outreach activities; and (3) an independent financial audit.