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G - 7

ICRISAT

1975/77

Vol. I



1760851

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CGIAR - G-7 - International Crops Research Institute for the Semi-Arid
Tropics (ICRISAT) - Correspondence 75/77-01

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This file is closed as of July 31, 1975.

For further correspondence, please see Volume II.

RECORDS MANAGEMENT SECTION

Mr. Warren C. Baum

July 21, 1975

Michael L. Lejeune (signed) Michael L. Lejeune

CGIAR - ICRISAT Subcommittee Meeting

We have assumed that the donors to ICRISAT would wish to meet with the Director-General (Dr. Cummings) and Chairman (Dr. Bentley) of ICRISAT about its Capital Program. A Secretariat paper on this subject has been circulated to the donors (with copies to the full CG membership) and 4:30 on Tuesday, July 29 was given as the time for a meeting. This will follow the WARDA presentation, the last one on Tuesday.

I believe you acted as chairman the last time the donors met as a Subcommittee to consider a ceiling on ICRISAT's expenditure. I assume you wish to be chairman again. Is this correct?

cc: Messrs. Ritchie
Coulter

MLLejeune:ia
Files:G-7/C-1

OFFICE MEMORANDUM

cc: D-16
cc: G-7
cc: G-10
cc: U

DATE: July 17, 1975

TO: Files

FROM: Michael L. Lejeune

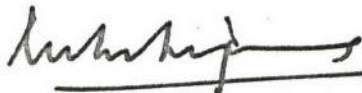
SUBJECT: SWEDEN

1. In Sweden I met with Mr. Hjertonsson of the Foreign Office, Dr. Aberg, Head of the Department of Husbandry at the Agricultural College of Sweden and a principal adviser to the Foreign Office on Agricultural Research, and Mr. Kalderen, who is now a Senior Adviser in the Foreign Office on aid matters.
2. Mr. Hjertonsson had been in the Swedish Delegation to the World Food Council meeting and he was greatly concerned at the bitter confrontation which had developed there between the Group of 77 and the developed countries. He felt that this bitterness might appear also in the deliberations of the CGFPI, and, for that reason, he felt it was wise that the relations between CGIAR and CGFPI should not be so close as to import into CGIAR the ill feeling between the developed and the developing countries.
3. With respect to the level of funds in 1976, Hjertonsson seemed, to some extent, to be concerned about burden-sharing. He felt the Japanese should do more and, although he had practically given up hope on them, he thought the French should do more as well. Sweden would certainly keep up to the same level of its contribution in 1976 (8 million Swedish krona) and would probably increase, but for tactical reasons, he was unwilling to announce an increase by Sweden until increases by others seemed assured. He did not name any figures, but I gained the impression that an increase of as much as 40 percent was not necessarily impossible. For internal CGIAR planning purposes, I suggest we use for the time being an increase of 25 percent, i.e., up to \$2.5 million equivalent, bearing in mind that we might get even as much as \$2.8 million, particularly if other OECD members appeared to be increasing their contributions by as much as 40 percent.
4. Mr. Hjertonsson said that in 1976 Sweden would maintain its level of contribution to ICRISAT, but beginning in 1977 would probably reduce its contribution by about \$200,000, which would be applied to other Centers. In this connection, they were particularly interested in the activities of the Genes Board and whether the Izmir Genes Bank would be taken over by ICARDA.
5. The head of the Swedish Delegation to Centers Week would be Dr. Aberg; Mr. Hjertonsson would not be coming but would come to the autumn meeting of the CG.
6. Over lunch we had a very lively discussion about the future of the CGIAR System, the role of centers in support of national research and extension programs and the continuing expansion of the system. The Swedes are particularly interested in finding ways to ensure that the technology which already exists is delivered to peasant farmers in the developing countries. Swedish foreign aid will continue to be provided

July 17, 1975

to activities which are clearly for the benefit of the poor in the developing countries and support social objectives. They will be watching to see whether the CGIAR activities meet these tests.

cc: Messrs. Ritchie
Coulter
Gavino

A handwritten signature in dark ink, appearing to be "Lester R. Brown", written over a horizontal line.

MichaelLLejeune:ia/js/D-19

OFFICE MEMORANDUM

TO: Files

FROM: Michael L. Lejeune

SUBJECT: United Kingdom

DATE: July 17, 1975

~~cc: 6-5, 6-6, 6-7, 6-2~~

D-21

66-5

66-6

66-7

66-2

1. At a meeting at the Overseas Development Ministry on July 2, I met with Mr. Mathieson, Mr. Melville, Mr. Cunningham and Mr. Maniece.
2. We first discussed the situation for calendar year 1975 in the light of the revised budgets which were now in hand from the Centers. I said that three centers would need additional contributions above what had been pledged in November. These were IITA, a full memorandum on which had been circulated to the CG membership, IRRI, whose needs were not yet entirely clear, but I expected to be able to give the position with more precision in about a week, and CIAT, which looked as if it would need somewhere in the area of \$80,000 and \$90,000.
3. I explained that of \$610,000 required by IITA, the Canadians had indicated they would provide \$100,000 (subject to ministerial approval), the Germans had not, at that time, been heard from and the World Bank would be ready to put up some of the required money, the exact amount depending upon the contribution of others in as much as the Bank is the residual donor. The U.K. representatives did not close the door to a contribution to IITA, but it was clear that they thought that ICRISAT and possibly IRRI had higher priority needs.
4. I stated that IRRI claimed it would need something of the order of \$280,000 but the Secretariat were not sure whether this amount was justified - there was to be further discussion with Dr. Brady in a few days time. (Based on cabled information from Dr. Coulter, I telephoned Mr. Mathieson on July 9 and informed him that the Secretariat supported additional contributions to IRRI of the order of up to \$279,000, the exact amount still subject to further check.)
5. We discussed at some length the position of ICRISAT. The British were considering whether to make a one-time contribution to ICRISAT's Capital Program. This contribution would be made in the British fiscal year ending April 1976, but it was recognized that the need for further capital funds did not arise until later. Mr. Melville, who is a member of the ICRISAT Board, spoke strongly in favor of such a contribution. The others present seemed to agree in principle and the discussion was merely concerned with the mechanics and justification for making a contribution which, in effect, would be in advance of the time when it would be needed.
6. I was not able to give them a precise figure on CIAT since I had not at that point seen the letter from Dr. Nickel. The U.K. representatives took note of CIAT's need, but made no particular comment one way or the other.

July 17, 1975

7. In sum, respecting 1975, it would appear that the U.K. has some additional funds to spend on CGIAR but they were still thinking out their own priorities. I would expect them to give their decisions during Centers Week. I pointed out that anything which could be done for IITA should be done as soon as possible, given its tight cash position.

8. We next discussed 1976. According to Mr. Mathieson, their contribution to the CGIAR in 1975 was £1.15 million. Various figures were discussed for 1976, but as I understood it, they would contribute about £1.75 million. If this turns out to be correct this would be an increase of over 50 percent. They appeared to be ready to make a firm indication during Centers Week.

9. We discussed some of the issues covered in the Integrative Paper and there was strong support for the idea of a review of the CGIAR System. There seemed to be a consensus that the system should now consolidate and should not, for a while at any rate, add further activities. They felt that support for national programs was of high priority, but were not at all sure this was a function to be performed by the International Centers.



cc: Messrs. Ritchie
Coulter
Gavino

MLLejeune:js/D-21

OFFICE MEMORANDUM

cc: 6-7
cc: 6-9

cc: 6-8

cc: 6-12

TO: Files

FROM: Michael L. Lejeune

SUBJECT: Norway

DATE: July 17, 1975

1. My discussions were held with NORAD. Mr. Bog opened them but had to depart for a Cabinet meeting on the reorganization of NORAD, and the discussions were continued with Dr. Strand and one of the NORAD program officers.

2. The plans for reorganization of NORAD are not yet complete but according to Mr. Bog (whom I met again later in the day), it was likely that the policy and planning function would be moved to the Foreign office and that NORAD would be purely a technical body for appraising projects and programs, and negotiating assistance within amounts and for purposes approved by the Foreign office.

3. NORAD already had a five-year program of aid for core programs of Centers supported by the CGIAR. The amounts planned are (in millions of Norwegian kroner):

1975	-	4
1976	-	6
1977	-	8
1978	-	10
1979	-	10

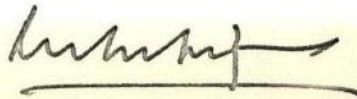
There would be amounts additional to these for aid for special projects. The dollar value of Norway's contribution in 1976 would depend upon the prevailing rate of exchange, but at about 5 kroner to the dollar, it would be \$1.2 million.

4. Norway proposes to continue to give the bulk of its contribution to ICRISAT, but from their questioning it was clear they were also considering ILCA, ILRAD and possibly the Genes Board.

5. I said that the 50 percent increase planned for 1976 was very welcome, but given the rapid rate at which the costs of the CGIAR System were rising, it would be helpful if they could give an even larger amount. We were particularly interested in getting members of OPEC to support CGIAR, and Norway's commitment to use a substantial proportion of its oil revenues for aid to the underdeveloped countries, including support for the CGIAR, could prove helpful. Norway's 1976 money for the CGIAR had already been cleared with the Ministry and included in the Foreign Ministry's budget which was about to go to the Cabinet, but had not yet gone to Parliament. It was late in the day to seek an increase but not impossible. I get the impression they might try, but we should not count on anything more than 6 million kroner already planned.

cc: Messrs. Ritchie
Coulter
Gavino

MLLejeune:js/D-18



G-7

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

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Telephone (Area Code 202) 477-3592
Cable Address - INTBAFRAD

ICW/75

July 14, 1975

TO: Participants in International Centers Week
FROM: Executive Secretariat
SUBJECT: Report by the CG Secretariat on ICRISAT's Capital Plan

1. Attached for information of members of the Consultative Group and of the Technical Advisory Committee is a paper giving the Secretariat's observations on the request from ICRISAT for an upward revision of the ceiling on its 1974-77 capital budget.
2. The Director of ICRISAT wishes to meet with donors to the Center during Centers Week to discuss this revision and the Secretariat is making tentative arrangements for a meeting at 4:30 p.m. on Tuesday, July 29, immediately following the plenary session.

Attachment

ICRISAT'S CAPITAL PLAN

A Report by the Secretariat to ICRISAT Donors

1. In April 1974, a subcommittee of the Consultative Group comprised of ICRISAT donors met in Washington, D.C. and approved a financial plan for ICRISAT's development. This plan assured ICRISAT of \$33 million to provide for the completion of its physical plant and to cover the recurring cost of core operations for the period 1974 through 1977. ICRISAT interpreted this plan as providing \$15.7 million for core operations and \$17.3 million for completion of the capital plan. Since \$1.8 million had been spent on capital items prior to 1974, the total cost of ICRISAT's facilities and related items was in fact budgeted at \$19.1 million.

2. In January 1975, the Director of ICRISAT informed the Secretariat that, following extensive efforts to achieve economy by redesigning, modifying specifications and broad-based tendering to ensure competition, it was clear that the original plan could not be completed within the budget ceiling of \$19.1 million; he asked the Secretariat for assistance in raising \$3.5 million in additional capital funds. In response to this request, a Secretariat mission visited ICRISAT in March 1975 and prepared a report which assessed the current cost for the original capital plan and made recommendations for reducing or deferring costs or both. Based on discussions with the Secretariat, and after taking into account the reactions and suggestions of ICRISAT's Executive Committee, the capital plan was further refined in June 1975.

3. Table I below compares the original financial plan of \$33 million with the current estimate of requirements.

Table I
ICRISAT Operating and Capital Budget /a
(\$ Millions)

	Through 1973	1974	1975	1976	1977	Total 74-77	Financial Plan of April 1974
A. Budget of April 1974							
Operating	3.6	2.7	3.7	4.5	4.8	15.7	15.7
Capital	1.8	3.2	6.4	4.7	3.0	17.3	17.3
Total	5.4	5.9	10.1	9.2	7.8	33.0	33.0
B. Estimate of June 1975							
Operating	3.6	2.4 /c	3.8	4.6	4.9	15.7	15.7
Capital	1.8 /b	1.4	5.3	7.6	5.8	20.1	17.3
Deferred to 1978	—	—	—	—	—	.8	—
Total	5.4	3.8	9.1	12.2	10.7	36.6	33.0
C. (+) Increase (-) Decrease Over Original Plan	-	-2.1	-1.0	+3.0	+2.9	+3.6	-

/a The figures in the table exclude the groundnut program which, for purposes of keeping current estimates comparable with the base figures, is treated separately. The estimate of total cost is based in ICRISAT figures and discussion with the Director.

/b Based on audit report of December 31, 1974. The Director's estimate of June 1975 shows this figure as \$1.3 million.

/c In ICRISAT's 1974 audit report core operating costs are overstated by \$418,266 by virtue of an incorrect allocation of overhead costs to the restricted core program; the retained income reported is overstated by an equal amount. The figure shown in this table is adjusted to correct the overstatement.

Core Operating Costs

4. As the above table shows, ICRISAT is proposing to develop its core operating program through 1977 within the agreed budget ceiling of \$15.7 million. Since inflation in 1974 and through the first half of 1975 has in fact been higher than originally foreseen, and may well continue at high rates over the next several years, this plan implies a slower real rate of growth in program implementation than envisaged in April 1974. In the

Secretariat's view, this slower rate of development is realistic and in line with the slower than expected development of the physical plant. Accordingly, the Secretariat supports the core operating budget as proposed for 1976 and 1977.

Capital Costs

5. Table II below breaks down the capital plan into its major components and compares the estimated cost at the time the donors met in April 1974 with the Secretariat estimates of March 1975 and the estimates provided by ICRISAT in June 1975. A more detailed breakdown of the original plan is provided in Annex A attached.

Table II

Total ICRISAT Capital Budget (\$ Millions)

	<u>ICRISAT Detailed Budget April 1974</u>	<u>Ceiling Agreed with Donors April 1974</u>	<u>Secretariat Mission Estimate March 1975</u>	<u>ICRISAT Estimate June 1975</u>
Capital Costs				
Site Development	.5		1.2	1.2
Campus External Work	2.3		2.2	2.2
Building Construc- tion	8.1		10.7	11.6
Equipment and Fur- niture	3.7		5.1	4.8
Architect Fees and Consultants	1.1		1.1	1.2
Contingency	<u>1.0</u>	<u> </u>	<u>1.3</u>	<u>1.7</u>
Total Capital Plan 1974-1977	16.4	17.3		
Disbursements Prior to 1974	<u>1.8</u>	<u>1.8</u>		
Total Cost	<u>18.2</u>	<u>19.1</u>	<u>21.6</u>	<u>22.7</u>

6. As the table shows, most of the higher than budgeted costs are accounted for by an overrun on the site development, construction and the furniture and equipment components of the original plan. The current estimates for site development and construction represent reasonably firm figures (Table III); the furniture and equipment estimates are less firm. Comments on the cost increases for various components of the capital plan follow. Since the information provided as part of ICRISAT's June 1975 estimates is not sufficiently detailed, the comments are based on the findings of the Secretariat mission in March 1975.

Site Development (plus \$700,000, 44% - No change in the June Estimate)

7. The substantial increase in site development costs reflects a significant change in the development concept. The original plan, which was not well defined in April 1974, included a modest complement of roads, sewers, lagoons, drainage, irrigation work and land shaping. The current plan is much more ambitious.

8. In the summer of 1974, ICRISAT, with the assistance of USAID, acquired extensive US Army surplus earth-moving equipment. The acquisition included 12 bulldozers, assorted heavy trucks, graders, rollers, backhoes and spare parts. In view of its equipment holdings, ICRISAT substantially expanded its development concept to include reservoirs, tank reclamation work and extensive land shaping for gravity flow irrigation.

9. The Secretariat believes that the site development plan is for all practical purposes past the point of no return and little can be done to reduce projected costs. In the long run the expanded site development concept will probably prove to be an effective use of funds, but it has nevertheless added substantially to the cost of the installation. Since the sale of the earth-moving equipment should realize about \$300,000 (probably in late 1976 or early 1977), the net cost of development after the sale of equipment will be about \$900,000. In analysing ICRISAT's financial requirements (see para. 21 below) \$300,000 has been added by the Secretariat to the projected 1977 income.

Construction (plus \$2.6 million, 32% - the June Estimate is plus \$3.5 million or 43%)

10. From the outset, the Consultative Group Secretariat expressed its concern about the scale and high quality of ICRISAT's building designs and specifications. These concerns were communicated to ICRISAT and to the donors at the time donors met in April 1974, and again to ICRISAT in May of that year, in the form of specific recommendations made by World Bank architects who had reviewed the plans. ICRISAT did make most of the changes recommended by the Bank's architects, but they did not send the plans back to their own architects for structural re-design (as recommended) on the grounds that this would have severely delayed the implementation of ICRISAT's programs. Based on the records reviewed by the Secretariat mission in March 1975, the buildings would have cost about 8 to 10% above current estimates had the specification changes recommended by the Bank not been made.

11. The unit costs resulting from construction bids, which are for the most part the basis for current cost estimates, confirm in our opinion that the installation is over designed compared with the Bank's experience of building in India. (See unit cost of construction figures in Annex B attached.) ICRISAT does not agree with this observation.

12. In agreement with the Consultative Group Secretariat, in February 1975, construction contracts totalling \$6.6 million were awarded against a priority listing totalling \$7.6 million and a total construction plan of \$10.7 million. Table III below lists major components of the construction program and shows the status of the program as of March 1975 in terms of items under contract, in the priority list but not yet under bid, and "deferred."

Table III
ICRISAT Total Cost of Construction
(\$ '000)

	Total Estimated Cost March 1975	Of Which	
		Under Contract	Bids Not Received "Deferred"
Library & Administration	1,150	1,150	
Laboratories & Lab Branches (3)	2,785	2,085	700
Farm Services Facilities	805	805	
Dining Center	459	459	
Plant Growth Facilities	508	508	
Warehouse	143	143	
Canteen	173	173	
Laundry	37		33
Gas Storage	9	9	
Gatehouse	13	13	
Dormitories	1,697	848	849
Flatlets	448	448	
Staff Housing	1,967		940 1,027
Guest House	271		271
Other Support Staff Housing	210		210
	<u>10,675</u>	<u>6,641</u>	<u>940 3,102</u>

Additional Items not
included in the approved
Financial Plan:

Telephone Building	86
Minor additional work on laboratories	33
Training Center	129
	<u>248</u>
Total	<u>10,923</u>
Estimate of June 1975	11,600

13. The Secretariat continues to be uneasy with respect to the \$2.1 million requested for staff housing (20 units for international staff and 44 units for essential support staff). Because of the substantial overrun on the construction component of the capital program, and on the arguments that (a) adequate rentals are available in Hyderabad at reasonable rates and (b) deferral of this element of the plan would in no way damage ICRISAT's rate of program development, the recent Secretariat mission recommended that a ceiling of \$1 million be imposed to allow on-site housing for a very limited number of essential staff through 1977. The mission further recommended that the question of additional staff housing be reviewed again in 1977. ICRISAT does not share the Secretariat's assessment of the local housing market.

Furniture and Equipment (plus \$1.4 million, 38% - June estimates show plus \$1.1 million or 30%)

14. At the time the Secretariat mission reviewed ICRISAT's furniture and equipment budget, some upward adjustments were made, mostly on the grounds of recent price changes in major items. Based on that review, furniture and equipment was projected to cost about \$5.1 million compared to an original budget of \$3.7 million. ICRISAT's June estimate calls for a budget of \$4.8 million.

15. About \$1.8 million of the furniture and equipment budget has been disbursed (mostly for vehicles, farm equipment, and office furnishings), and an additional \$230,000 was under purchase order in March 1975. The major components of the budget are shown in Table IV below.

Table IV
ICRISAT - Total Cost of Furniture and Equipment
(\$ '000)

	Estimate of March 1975	Purchased To Date	Of Which Now On Order	Estimated Unspent Balance
Scientific Equipment	1,335	41	37	1,257
Furniture	635	251	40	343
Base Stock	100	-	-	100
Tractor & Field Equipment	810	694	16	100
Vehicles	1,100	480	101	519
Tools & Shop Equipment	195	121	3	71
Computer	170	-	-	170
Office Equipment	165	81	12	72
Audio Visual Equipment	65	49	4	12
Electrical & Grounds Equipment	70	9	1	60
Kitchen Equipment & Air Conditioning	333	42	-	291
Laundry	27	-	-	27
Books & Publications	58	32	6	20
Total	<u>5,063</u>	<u>1,800</u>	<u>220</u>	<u>3,043</u>
June estimates	4,800			

16. The Secretariat mission recommended greater economy in this budget and suggested line item ceilings which would have brought the total down by about \$1 million to \$4.1 million. Some of the reductions recommended were admittedly general judgments but others were made on specific grounds. For example, the mission recommends:

- (a) A reduction of about \$145,000 in furniture, roughly in line with the recommendations on staff housing;
- (b) A \$300,000 reduction in the vehicle budget, on the grounds that the proposed budget of \$1.1 million was excessive (assuming \$4,500 per vehicle this budget would provide 245 vehicles);
- (c) A reduction in computing equipment where P.S. Ross had suggested a figure of \$18,000 for ICRISAT; and
- (d) A reduction in the cost of kitchen and air conditioning equipment.

17. In submitting a revised estimate of \$4.8 million for furniture and equipment in June 1975, the Director of ICRISAT noted that he was unable to reduce the vehicle budget which includes a number of light lorries and trucks for field services, and buses for transporting staff to and from site construction. With respect to the computer question, ICRISAT is proposing to go immediately to a small computer rather than a programmable calculator as recommended by the Ross Report. The Director notes that this step is necessary because ICRISAT is not able to buy adequate computer services from outside sources.

Summary

18. During the past six months ICRISAT has made a thorough review of its capital plan, both with the Secretariat and with the Executive Committee of its Board of Trustees. Given actual developments through the end of 1974, firm bids in January 1975 on major items of construction and more refined estimates for capital items to be tendered, ICRISAT now believes that an additional \$3.6 million is required to complete its physical plant. Accordingly, ICRISAT is requesting an increase of \$2.8 million in the ceiling of \$17.3 million established for the period 1974-77 and, an additional \$800,000 in 1978.

19. On the grounds that price increases have in fact been running higher than originally expected, and because some of the original development plans were not fully refined when the estimates were prepared in the spring of 1974, the Secretariat supports some increase in the total capital budget ceiling of \$19.1 million agreed to in 1974 (\$17.3 million plus \$1.8 million spent prior to 1974). More specifically, it is supporting an increase of \$2.2 million in the capital budget for a new ceiling of \$21.3 million, and recommends to ICRISAT donors a reduction of \$1.1 million in the staff housing provision and a reduction of \$300,000 in the \$4.8 million requested for furniture and equipment.

20. With respect to the staff housing situation, the Secretariat recommends reviewing the question of adequate local housing in 1977. The reduction of \$300,000 in the furniture and equipment budget is largely based on the belief that the items in this budget are not as refined in content or as accurately costed as other components in the capital plan and that the contingency provision of \$1.7 million should provide some relief if in fact, based on more refined costing, the equipment budget proves too stringent.

Funds Required and Available

21. Based on the Secretariat's recommended budget which provides (a) \$15.7 million for core operations over the period 1974-1977; (b) \$1 million for the groundnut program, and (c) \$19.5 million for the completion of the capital plan (now expected in 1978); the Secretariat has prepared an estimate of ICRISAT's funds required and available over the period 1974-1978 as shown in Table V below.

Table V
Estimated Funds Required and Available 1974-1978

CG Recommended Budget (\$ Millions)							
	Through 1973	1974	1975	1976	1977	Total FY74-77	FY78
A. Operations & Capital							
Disbursements							
Core Operating	3.6	2.4	3.8	4.6	4.9	15.7	5.7
Capital	1.8	1.4	4.1 /a	7.5	5.7	18.7	.8
Sub-total	5.4	3.8	7.9	12.1	10.6	34.4	6.5
Groundnut Program			.2	.3	.5	1.0	.6
Total Disbursements	5.4	3.8	8.1	12.4	11.1	35.4	7.1
B. Funds Available:							
Carryover from Previous Year		2.7	5.3	6.6	3.1	2.7	1.3
Funds Pledged or Anticipated /c							
Regular Core Program		6.1	8.0	8.4	8.1	30.6	4.4 /e
Groundnut Program		-	.2	.3	.5	1.0	.8
Possible Additional Funds			.7				
Earned Income /d		.6	.8	.5	.6	2.5	.3
Total Funds Unforeseen		9.4	15.0	15.8	12.3	36.8	6.8
C. Funds Required							
Projected Disbursements		3.8	8.1	12.4	11.1	35.4	7.1
Working Capital		.3	.7	1.0	.9	1.0	.6
Of Which on Hand		(.4)	(.4)	(.7)	(1.0)	(.9)	(.9)
Total Required		4.1	8.4	12.7	11.0	35.5	6.8
Funds carried over to next year		5.3 /b	6.6	3.1	1.3	1.3	-

- /a Assumes \$1.1 million reduction in staff housing budget and \$100,000 reduction in furniture and equipment budget. The remaining cut of \$200,000 in the furniture and equipment budget is spread equally between 1976 and 1977.
- /b Unexpended capital balance of \$4,184,000 plus building materials on hand at end of 1974 of \$764,000 and \$440,000 in working capital.
- /c Funds pledged or anticipated for regular core program are based on:
(i) 1974 - draft audit report; (ii) 1975 - current budget estimates;
(iii) 1976-77 - table attached to Secretariat memorandum of July 1, 1974 to Dr. Cummings. For the groundnut program, the figure has been set by assumption equal to projected disbursements.
- /d Estimated by Secretariat based on opening and closing fund balances, plus assumed income of \$100,000 from sale of crops and \$100,000 from allocated overhead on special projects. In 1977, \$300,000 has been added to income from the sale of earth-moving equipment.
- /e Expected level of funding required in 1978 with carryover position reduced to zero in 1978.

ANNEX A
ESTIMATED COST OF ICRISAT CAPITAL PLAN
APRIL 1974 and MARCH 1975
(\$ 000)

	April 1974	March 1975	Change Amount	%
<u>Site Development</u>				
Temporary Structures	46	100	54	117
Fences	46	46	-	-
Roads Unpaved	37	30	-7	-19
Drainage, Tank Reclamation and Land Shaping	184	655	471	256
Irrigation System & Equipment	107	280	173	161
Relocation of Power Lines	33	25	-8	-24
Land Surveys	17	11	-6	-35
TOTAL	470	1147	677	144
<u>Campus External</u>				
Road Paving	390			
Earth-Movement	156			
Recreation Facilities	120			
Subtotal	766	406	-360	-47
Utilities & Services	1326	1751	425	32
Contingency	179		-179	-
TOTAL	2271	2157	-114	-5
<u>Building Construction</u>				
Administration	620	1150	530	85
Laboratory & Group Work Area	2438	2785	347	14
Farm Services & Facilities	558	805	247	44
Plant Growth Facilities	411	508	97	24
Dining Center	283	459	176	62
Canteen	100	173	73	73
Warehouse & Stores	79	143	64	81
Gate House	57	13	-44	-77
Laundry	39	37	-2	-5
Gas Storage	60	9	-51	-85
Housing:				
Dormitories	836	1697	861	103
Flatlets	265	448	183	69
Staff Housing	1699	1967	268	16
Guest House	252	271	19	8
Other Staff Housing	166	210	44	27
TOTAL Original Plan	7863	10675	2812	35
Additions:				
Telephone Building		86	86	-
Lab Entrance		33	33	-
Training Center		129	129	-
Deletions:				
Sprayer Wash Unit	11			
Covered Parking	60			
Recreation Facilities	156			
TOTAL	8090	10923	2833	35

	April 1974	March 1975	Amount	%
<u>Furniture & Equipment</u>				
Scientific Equipment	1192	1335	143	12
Furniture	762	635	-127	-17
Materials Base Stock	100	100	-	-
Tractors & Field Equipment	680	810	130	19
Vehicles	450	1100	650	144
Tools & Printing Equipment	165	260	95	58
Computer Facilities	100	170	70	70
Office Equipment	95	165	70	74
Site Equipment	70	70	-	-
Kitchen Equipment	70	360	290	314
Books & Publication	58	58	-	-
TOTAL	3742	5063	1321	35
<u>Other Items</u>				
Architect Fees	960	1040	80	8
Consultant Fees	65	50	-15	-23
Interior Decorations	20	20	-	-
Landscaping	20	20	-	-
Subtotal	1065	1130	65	6
Contingencies	980	1343	363	37
TOTAL	2045	2488	443	22
 TOTAL Original Program	16618			
Increase approved by Donors	732			
TOTAL	17350	21530	4180	24
 Additional Items of Construction		248		
TOTAL	17350	21778	4428	26

ANNEX B

ICRISAT
UNIT COST OF CONSTRUCTION
April 1974 and March 1975

	Sq. Ft. (000)		Cost per ^{a/} Sq. Ft. \$	
	April 1974	March 1975	April 1974	March 1975
Administration				
General	24.3	23.5	13.58	22.98*
Library	16.5	17.0	8.97	17.53*
Auditorium	7.6	14.2	18.68	21.97*
Total Administration	48.4	54.7	12.81	21.02
Labor				
West I	20.4	25.9	22.74	22.70*
West II	20.4	25.9	22.74	22.43*
West III	20.2	25.9		
Crop Work Area	36.8	36.7	17.21	20.83
Total Laboratories	97.8	114.4	19.52	21.62
Farm Service Facility	82.3	66.4	6.78	12.12*
Plant Growth Facilities	24.0	16.1	17.12	31.5 *
Dining Center	19.8	19.9	16.31	23.18*
Canteen	9.6	9.8	10.41	17.65
Warehouse & Stores	12.8	13.0	6.17	11.00
Gatehouse		.8		16.25*
Laundry	2.3	2.3	16.95	16.08
Sub Total	151.6	128.3	10.46	16.73
Housing:				
Dormitories	79.2	76.9	10.55	22.06*
Flatlets	20.0	18.5	13.25	24.22*
Staff Housing: (20 units)				
International Staff Housing	45.0	48.7		
Directors House	4.5	4.5		
Essential Support Staff (32 units)	56.1	56.1		
Other Support Staff	17.6	17.6		
Total Staff Housing	123.2	126.9	13.79	15.50
Guest House	16.3	16.2	15.46	16.73
Total Housing	238.7	238.5	13.48	19.25
TOTAL	536.5	535.9	14.66	19.92

^{a/} Cost per square foot is based on the total estimated cost per item, including an allocated share of common area cost, divided by the sq.ft. per building.

* Indicates pricing is based on tenders.

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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

ICW/75

July 14, 1975

TO: Participants in International Centers Week
FROM: Executive Secretariat
SUBJECT: Report by the CG Secretariat on ICRISAT's Capital Plan

1. Attached for information of members of the Consultative Group and of the Technical Advisory Committee is a paper giving the Secretariat's observations on the request from ICRISAT for an upward revision of the ceiling on its 1974-77 capital budget.
2. The Director of ICRISAT wishes to meet with donors to the Center during Centers Week to discuss this revision and the Secretariat is making tentative arrangements for a meeting at 4:30 p.m. on Tuesday, July 29, immediately following the plenary session.

Attachment

ICRISAT'S CAPITAL PLAN

A Report by the Secretariat to ICRISAT Donors

1. In April 1974, a subcommittee of the Consultative Group comprised of ICRISAT donors met in Washington, D.C. and approved a financial plan for ICRISAT's development. This plan assured ICRISAT of \$33 million to provide for the completion of its physical plant and to cover the recurring cost of core operations for the period 1974 through 1977. ICRISAT interpreted this plan as providing \$15.7 million for core operations and \$17.3 million for completion of the capital plan. Since \$1.8 million had been spent on capital items prior to 1974, the total cost of ICRISAT's facilities and related items was in fact budgeted at \$19.1 million.

2. In January 1975, the Director of ICRISAT informed the Secretariat that, following extensive efforts to achieve economy by redesigning, modifying specifications and broad-based tendering to ensure competition, it was clear that the original plan could not be completed within the budget ceiling of \$19.1 million; he asked the Secretariat for assistance in raising \$3.5 million in additional capital funds. In response to this request, a Secretariat mission visited ICRISAT in March 1975 and prepared a report which assessed the current cost for the original capital plan and made recommendations for reducing or deferring costs or both. Based on discussions with the Secretariat, and after taking into account the reactions and suggestions of ICRISAT's Executive Committee, the capital plan was further refined in June 1975.

3. Table I below compares the original financial plan of \$33 million with the current estimate of requirements.

Table I
ICRISAT Operating and Capital Budget /a
(\$ Millions)

	Through 1973	1974	1975	1976	1977	Total 74-77	Financial Plan of April 1974
A. Budget of April 1974							
Operating	3.6	2.7	3.7	4.5	4.8	15.7	15.7
Capital	1.8	3.2	6.4	4.7	3.0	17.3	17.3
Total	5.4	5.9	10.1	9.2	7.8	33.0	33.0
B. Estimate of June 1975							
Operating	3.6	2.4 /c	3.8	4.6	4.9	15.7	15.7
Capital	1.8 /b	1.4	5.3	7.6	5.8	20.1	17.3
Deferred to 1978	—	—	—	—	—	.8	—
Total	5.4	3.8	9.1	12.2	10.7	36.6	33.0
C. (+) Increase (-) Decrease Over Original Plan	-	-2.1	-1.0	+3.0	+2.9	+3.6	-

/a The figures in the table exclude the groundnut program which, for purposes of keeping current estimates comparable with the base figures, is treated separately. The estimate of total cost is based in ICRISAT figures and discussion with the Director.

/b Based on audit report of December 31, 1974. The Director's estimate of June 1975 shows this figure as \$1.3 million.

/c In ICRISAT's 1974 audit report core operating costs are overstated by \$418,266 by virtue of an incorrect allocation of overhead costs to the restricted core program; the retained income reported is overstated by an equal amount. The figure shown in this table is adjusted to correct the overstatement.

Core Operating Costs

4. As the above table shows, ICRISAT is proposing to develop its core operating program through 1977 within the agreed budget ceiling of \$15.7 million. Since inflation in 1974 and through the first half of 1975 has in fact been higher than originally foreseen, and may well continue at high rates over the next several years, this plan implies a slower real rate of growth in program implementation than envisaged in April 1974. In the

Secretariat's view, this slower rate of development is realistic and in line with the slower than expected development of the physical plant. Accordingly, the Secretariat supports the core operating budget as proposed for 1976 and 1977.

Capital Costs

5. Table II below breaks down the capital plan into its major components and compares the estimated cost at the time the donors met in April 1974 with the Secretariat estimates of March 1975 and the estimates provided by ICRISAT in June 1975. A more detailed breakdown of the original plan is provided in Annex A attached.

Table II

	<u>Total ICRISAT Capital Budget</u>			
	(\$ Millions)			
	ICRISAT Detailed Budget April 1974	Ceiling Agreed with Donors April 1974	Secretariat Mission Estimate March 1975	ICRISAT Estimate June 1975
Capital Costs				
Site Development	.5		1.2	1.2
Campus External Work	2.3		2.2	2.2
Building Construc- tion	8.1		10.7	11.6
Equipment and Fur- niture	3.7		5.1	4.8
Architect Fees and Consultants	1.1		1.1	1.2
Contingency	<u>1.0</u>		<u>1.3</u>	<u>1.7</u>
Total Capital Plan 1974-1977	16.4	17.3		
Disbursements Prior to 1974	<u>1.8</u>	<u>1.8</u>		
Total Cost	<u>18.2</u>	<u>19.1</u>	<u>21.6</u>	<u>22.7</u>

6. As the table shows, most of the higher than budgeted costs are accounted for by an overrun on the site development, construction and the furniture and equipment components of the original plan. The current estimates for site development and construction represent reasonably firm figures (Table III); the furniture and equipment estimates are less firm. Comments on the cost increases for various components of the capital plan follow. Since the information provided as part of ICRISAT's June 1975 estimates is not sufficiently detailed, the comments are based on the findings of the Secretariat mission in March 1975.

Site Development (plus \$700,000, 44% - No change in the June Estimate)

7. The substantial increase in site development costs reflects a significant change in the development concept. The original plan, which was not well defined in April 1974, included a modest complement of roads, sewers, lagoons, drainage, irrigation work and land shaping. The current plan is much more ambitious.

8. In the summer of 1974, ICRISAT, with the assistance of USAID, acquired extensive US Army surplus earth-moving equipment. The acquisition included 12 bulldozers, assorted heavy trucks, graders, rollers, backhoes and spare parts. In view of its equipment holdings, ICRISAT substantially expanded its development concept to include reservoirs, tank reclamation work and extensive land shaping for gravity flow irrigation.

9. The Secretariat believes that the site development plan is for all practical purposes past the point of no return and little can be done to reduce projected costs. In the long run the expanded site development concept will probably prove to be an effective use of funds, but it has nevertheless added substantially to the cost of the installation. Since the sale of the earth-moving equipment should realize about \$300,000 (probably in late 1976 or early 1977), the net cost of development after the sale of equipment will be about \$900,000. In analysing ICRISAT's financial requirements (see para. 21 below) \$300,000 has been added by the Secretariat to the projected 1977 income.

Construction (plus \$2.6 million, 32% - the June Estimate is plus \$3.5 million or 43%)

10. From the outset, the Consultative Group Secretariat expressed its concern about the scale and high quality of ICRISAT's building designs and specifications. These concerns were communicated to ICRISAT and to the donors at the time donors met in April 1974, and again to ICRISAT in May of that year, in the form of specific recommendations made by World Bank architects who had reviewed the plans. ICRISAT did make most of the changes recommended by the Bank's architects, but they did not send the plans back to their own architects for structural re-design (as recommended) on the grounds that this would have severely delayed the implementation of ICRISAT's programs. Based on the records reviewed by the Secretariat mission in March 1975, the buildings would have cost about 8 to 10% above current estimates had the specification changes recommended by the Bank not been made.

11. The unit costs resulting from construction bids, which are for the most part the basis for current cost estimates, confirm in our opinion that the installation is over designed compared with the Bank's experience of building in India. (See unit cost of construction figures in Annex B attached.) ICRISAT does not agree with this observation.

12. In agreement with the Consultative Group Secretariat, in February 1975, construction contracts totalling \$6.6 million were awarded against a priority listing totalling \$7.6 million and a total construction plan of \$10.7 million. Table III below lists major components of the construction program and shows the status of the program as of March 1975 in terms of items under contract, in the priority list but not yet under bid, and "deferred."

Table III
ICRISAT Total Cost of Construction
(\$ '000)

	Total Estimated Cost March 1975	----- Under Contract	Of Which Bids Not Received	----- "Deferred"
Library & Administration	1,150	1,150		
Laboratories & Lab Branches (3)	2,785	2,085		700
Farm Services Facilities	805	805		
Dining Center	459	459		
Plant Growth Facilities	508	508		
Warehouse	143	143		
Canteen	173	173		
Laundry	37			33
Gas Storage	9	9		
Gatehouse	13	13		
Dormitories	1,697	848		849
Flatlets	448	448		
Staff Housing	1,967		940	1,027
Guest House	271			271
Other Support Staff Housing	210			210
	<u>10,675</u>	<u>6,641</u>	<u>940</u>	<u>3,102</u>

Additional Items not
included in the approved
Financial Plan:

Telephone Building	86
Minor additional work on laboratories	33
Training Center	129
	<u>248</u>
Total	<u>10,923</u>
Estimate of June 1975	<u>11,600</u>

13. The Secretariat continues to be uneasy with respect to the \$2.1 million requested for staff housing (20 units for international staff and 44 units for essential support staff). Because of the substantial overrun on the construction component of the capital program, and on the arguments that (a) adequate rentals are available in Hyderabad at reasonable rates and (b) deferral of this element of the plan would in no way damage ICRISAT's rate of program development, the recent Secretariat mission recommended that a ceiling of \$1 million be imposed to allow on-site housing for a very limited number of essential staff through 1977. The mission further recommended that the question of additional staff housing be reviewed again in 1977. ICRISAT does not share the Secretariat's assessment of the local housing market.

Furniture and Equipment (plus \$1.4 million, 38% - June estimates show plus \$1.1 million or 30%)

14. At the time the Secretariat mission reviewed ICRISAT's furniture and equipment budget, some upward adjustments were made, mostly on the grounds of recent price changes in major items. Based on that review, furniture and equipment was projected to cost about \$5.1 million compared to an original budget of \$3.7 million. ICRISAT's June estimate calls for a budget of \$4.8 million.

15. About \$1.8 million of the furniture and equipment budget has been disbursed (mostly for vehicles, farm equipment, and office furnishings), and an additional \$230,000 was under purchase order in March 1975. The major components of the budget are shown in Table IV below.

Table IV
ICRISAT - Total Cost of Furniture and Equipment
(\$ '000)

	Estimate of March 1975	Purchased To Date	Of Which Now On Order	Estimated Unspent Balance
Scientific Equipment	1,335	41	37	1,257
Furniture	635	251	40	343
Base Stock	100	-	-	100
Tractor & Field Equipment	810	694	16	100
Vehicles	1,100	480	101	519
Tools & Shop Equipment	195	121	3	71
Computer	170	-	-	170
Office Equipment	165	81	12	72
Audio Visual Equipment	65	49	4	12
Electrical & Grounds Equipment	70	9	1	60
Kitchen Equipment & Air Conditioning	333	42	-	291
Laundry	27	-	-	27
Books & Publications	58	32	6	20
Total	5,063	1,800	220	3,043
June estimates	4,800			

16. The Secretariat mission recommended greater economy in this budget and suggested line item ceilings which would have brought the total down by about \$1 million to \$4.1 million. Some of the reductions recommended were admittedly general judgments but others were made on specific grounds. For example, the mission recommends:

- (a) A reduction of about \$145,000 in furniture, roughly in line with the recommendations on staff housing;
- (b) A \$300,000 reduction in the vehicle budget, on the grounds that the proposed budget of \$1.1 million was excessive (assuming \$4,500 per vehicle this budget would provide 245 vehicles);
- (c) A reduction in computing equipment where P.S. Ross had suggested a figure of \$18,000 for ICRISAT; and
- (d) A reduction in the cost of kitchen and air conditioning equipment.

17. In submitting a revised estimate of \$4.8 million for furniture and equipment in June 1975, the Director of ICRISAT noted that he was unable to reduce the vehicle budget which includes a number of light lorries and trucks for field services, and buses for transporting staff to and from site construction. With respect to the computer question, ICRISAT is proposing to go immediately to a small computer rather than a programmable calculator as recommended by the Ross Report. The Director notes that this step is necessary because ICRISAT is not able to buy adequate computer services from outside sources.

Summary

18. During the past six months ICRISAT has made a thorough review of its capital plan, both with the Secretariat and with the Executive Committee of its Board of Trustees. Given actual developments through the end of 1974, firm bids in January 1975 on major items of construction and more refined estimates for capital items to be tendered, ICRISAT now believes that an additional \$3.6 million is required to complete its physical plant. Accordingly, ICRISAT is requesting an increase of \$2.8 million in the ceiling of \$17.3 million established for the period 1974-77 and, an additional \$800,000 in 1978.

19. On the grounds that price increases have in fact been running higher than originally expected, and because some of the original development plans were not fully refined when the estimates were prepared in the spring of 1974, the Secretariat supports some increase in the total capital budget ceiling of \$19.1 million agreed to in 1974 (\$17.3 million plus \$1.8 million spent prior to 1974). More specifically, it is supporting an increase of \$2.2 million in the capital budget for a new ceiling of \$21.3 million, and recommends to ICRISAT donors a reduction of \$1.1 million in the staff housing provision and a reduction of \$300,000 in the \$4.8 million requested for furniture and equipment.

20. With respect to the staff housing situation, the Secretariat recommends reviewing the question of adequate local housing in 1977. The reduction of \$300,000 in the furniture and equipment budget is largely based on the belief that the items in this budget are not as refined in content or as accurately costed as other components in the capital plan and that the contingency provision of \$1.7 million should provide some relief if in fact, based on more refined costing, the equipment budget proves too stringent.

Funds Required and Available

21. Based on the Secretariat's recommended budget which provides (a) \$15.7 million for core operations over the period 1974-1977; (b) \$1 million for the groundnut program, and (c) \$19.5 million for the completion of the capital plan (now expected in 1978); the Secretariat has prepared an estimate of ICRISAT's funds required and available over the period 1974-1978 as shown in Table V below.

Table V
Estimated Funds Required and Available 1974-1978

	<u>CG Recommended Budget</u> (\$ Millions)						
	<u>Through</u> <u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u> <u>FY74-77</u>	<u>FY78</u>
A. Operations & Capital							
<u>Disbursements</u>							
Core Operating	3.6	2.4	3.8	4.6	4.9	15.7	5.7
Capital	<u>1.8</u>	<u>1.4</u>	<u>4.1</u> /a	<u>7.5</u>	<u>5.7</u>	<u>18.7</u>	<u>.8</u>
Sub-total	5.4	3.8	7.9	12.1	10.6	34.4	6.5
Groundnut Program			.2	.3	.5	1.0	.6
Total Disbursements	<u>5.4</u>	<u>3.8</u>	<u>8.1</u>	<u>12.4</u>	<u>11.1</u>	<u>35.4</u>	<u>7.1</u>
B. Funds Available:							
Carryover from							
Previous Year		2.7	5.3	6.6	3.1	2.7	1.3
Funds Pledged or							
Anticipated /c							
Regular Core Program		6.1	8.0	8.4	8.1	30.6	4.4 /e
Groundnut Program		-	.2	.3	.5	1.0	.8
Possible Additional Funds			.7				
Earned Income /d		.6	.8	.5	.6	2.5	.3
Total Funds Unforeseen		<u>9.4</u>	<u>15.0</u>	<u>15.8</u>	<u>12.3</u>	<u>36.8</u>	<u>6.8</u>
C. Funds Required							
Projected Disbursements		3.8	8.1	12.4	11.1	35.4	7.1
Working Capital		.3	.7	1.0	.9	1.0	.6
Of Which on Hand		<u>(.4)</u>	<u>(.4)</u>	<u>(.7)</u>	<u>(1.0)</u>	<u>(.9)</u>	<u>(.9)</u>
Total Required		<u>4.1</u>	<u>8.4</u>	<u>12.7</u>	<u>11.0</u>	<u>35.5</u>	<u>6.8</u>
Funds carried over							
to next year		5.3 /b	6.6	3.1	1.3	1.3	-

- /a Assumes \$1.1 million reduction in staff housing budget and \$100,000 reduction in furniture and equipment budget. The remaining cut of \$200,000 in the furniture and equipment budget is spread equally between 1976 and 1977.
- /b Unexpended capital balance of \$4,184,000 plus building materials on hand at end of 1974 of \$764,000 and \$440,000 in working capital.
- /c Funds pledged or anticipated for regular core program are based on:
(i) 1974 - draft audit report; (ii) 1975 - current budget estimates;
(iii) 1976-77 - table attached to Secretariat memorandum of July 1, 1974 to Dr. Cummings. For the groundnut program, the figure has been set by assumption equal to projected disbursements.
- /d Estimated by Secretariat based on opening and closing fund balances, plus assumed income of \$100,000 from sale of crops and \$100,000 from allocated overhead on special projects. In 1977, \$300,000 has been added to income from the sale of earth-moving equipment.
- /e Expected level of funding required in 1978 with carryover position reduced to zero in 1978.

22. Because the implementation of the capital plan has not progressed as rapidly as expected when the financial plan was worked out in April 1974, ICRISAT is expected to go into 1976 with unexpended funds of around \$6.6 million. By the end of 1976 this level of liquidity will be reduced by half based on ICRISAT's estimate of 1976 expenditures.

July 14, 1975

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April 1974 and March 1975

	Sq. Ft. (000)		Cost per ^{a/} Sq. Ft. \$	
	April 1974	March 1975	April 1974	March 1975
Administration				
General	24.3	23.5	13.58	22.98*
Library	16.5	17.0	8.97	17.53*
Auditorium	7.6	14.2	18.68	21.97*
Total Administration	48.4	54.7	12.81	21.02
Labor				
West I	20.4	25.9	22.74	22.70*
West II	20.4	25.9	22.74	22.43*
West III	20.2	25.9		
Crop Work Area	36.8	36.7	17.21	20.83
Total Laboratories	97.8	114.4	19.52	21.62
Farm Service Facility	82.3	66.4	6.78	12.12*
Plant Growth Facilities	24.0	16.1	17.12	31.5 *
Dining Center	19.8	19.9	16.31	23.18*
Canteen	9.6	9.8	10.41	17.65
Warehouse & Stores	12.8	13.0	6.17	11.00
Gatehouse		.8		16.25*
Laundry	2.3	2.3	16.95	16.08
Sub Total	151.6	128.3	10.46	16.73
Housing:				
Dormitories	79.2	76.9	10.55	22.06*
Flatlets	20.0	18.5	13.25	24.22*
Staff Housing: (20 units)				
International Staff Housing	45.0	48.7		
Directors House	4.5	4.5		
Essential Support Staff (32 units)	56.1	56.1		
Other Support Staff	17.6	17.6		
Total Staff Housing	123.2	126.9	13.79	15.50
Guest House	16.3	16.2	15.46	16.73
Total Housing	238.7	238.5	13.48	19.25
TOTAL	536.5	535.9	14.66	19.92

^{a/} Cost per square foot is based on the total estimated cost per item, including an allocated share of common area cost, divided by the sq.ft. per building.

* Indicates pricing is based on tenders.

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
ICRISAT
SECUNDERABAD

DATE: JULY 14, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366
(3592)

COUNTRY: INDIA

TEXT:
Cable No.:

AS PART OF OUR EFFORT TO INCREASE JAPANESE INTEREST IN AND SUPPORT FOR
OGIAR BAUM HAS INVITED SENIOR JAPANESE PARLIAMENTARIAN ICHIRO NAKAGAWA
TO PARTICIPATE CENTERS WEEK AND TO VISIT SEVERAL INTERNATIONAL CENTERS
THEREAFTER STOP NAKAGAWA HAS EXPRESSED PARTICULAR INTEREST IN ICRISAT STOP
NAKAGAWA ACCOMPANIED BY HIS PERSONAL SECRETARY MISTER SATOH AND KAZUHIKO
SAKAI OF WORLD BANK TOKYO OFFICE PLANNING ARRIVE HYDERABAD AUGUST 16
AT 10.40 VIA IC 403 FROM DELHI WITH DEPARTURE APPARENTLY ALSO AUGUST
16 AT 18.45 VIA IC 404 STOP CAN CONFIRM HIS ITINERARY DURING CENTERS
WEEK STOP MOST GRATEFUL YOUR ASSISTANCE ARRANGE SUITABLE ICRISAT
VISIT

REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. OGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: MLLejeune:js/G-7

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INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

DATE JULY 14, 1975

TO: COMINGS
FROM: TONKAT
SUBJECT: NAKAGAWA

CLASS OF
SERVICE
TELEX: ICRSAT 015-366
(3592)

COUNTRY: INDIA

TEXT
Cable No.

AS PART OF OUR EFFORT TO INCREASE JAPANESE INTEREST IN AND SUPPORT FOR
OTHER BANK HAS INVITED SENIOR JAPANESE PARLIAMENTARIAN ICHIRO NAKAGAWA
TO PARTICIPATE CENTERS WEEK AND TO VISIT SEVERAL INTERNATIONAL CENTERS
THEREAFTER STOP NAKAGAWA HAS EXPRESSED PARTICULAR INTEREST IN ICRSAT STOP
NAKAGAWA ACCOMPANIED BY HIS PERSONAL SECRETARY MISTER SATOH AND KAZUHIKO
SARAS OF WORLD BANK TOKYO OFFICE PLANNING ARRIVE HYDERABAD AUGUST 16
AT 10.40 VIA IC 803 FROM DELHI WITH DEPARTURE APPARENTLY ALSO AUGUST
16 AT 18.45 VIA IC 804 STOP CAN CONFIRM HIS ITINERARY DURING CENTERS
WEEK STOP MOST GRATEFUL YOUR ASSISTANCE ARRANGE OUTSTANDING INQUIRY
VISIT

REMARKS
LEADS

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COMMUNICATIONS

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Michael L. Johnson

Chief Secretariat

DISPATCHED

Reference: 357-7

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IMPORTANT: See Secretariat Guide for preparing form

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: JULY 11, 1975

CLASS OF
SERVICE: ~~Telex No. 015-366~~

Ext. 2765

COUNTRY: INDIA

TEXT:
Cable No.:

DONORS HAVE BEEN ASKED TO CONSIDER A MEETING, TO FOLLOW PLENARY
SESSION ON TUESDAY, JULY 29, TO DISCUSS ICRISAT FUNDING.

REGARDS

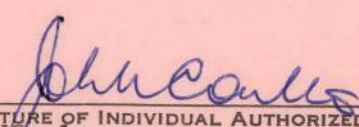
COULTER

NOT TO BE TRANSMITTED

AUTHORIZED BY: John K. Coulter

NAME CGIAR Secretariat

DEPT.

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)
REFERENCE: JK Coulter:apm

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CORPORATION

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RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

DATE JULY 11, 1975

TO

CHARTER
SECRETARIAT
SECUNDERABAD

CLASS OF

SERVICE TELEPHONE NO. 915-366

EXT. 2762

INDIA

COUNTRY

TEXT

Cable No.

DONORS HAVE BEEN ASKED TO CONSIDER A MEETING, TO FOLLOW PLANNARY

SESSION ON TUESDAY, JULY 29, TO DISCUSS ICRIAT FUNDING.

REGARDS

COULTER

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APPROVED BY: John K. Coulter

NAME: CGIAR Secretariat

NAME

DEPT.

SIGNATURE

SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

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ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

Control Files
INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

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TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: JULY 11, 1975

CLASS OF
SERVICE: Telex No. 015-366

Ext. 2765

COUNTRY: INDIA

TEXT:
Cable No.:

DONORS HAVE BEEN ASKED TO CONSIDER A MEETING, TO FOLLOW PLENARY
SESSION ON TUESDAY, JULY 29, TO DISCUSS ICRISAT FUNDING.

REGARDS:

COULTER

NOT TO BE TRANSMITTED

AUTHORIZED BY: John K. Coulter

NAME CCIAR Secretariat

DEPT.

SIGNATURE *John Coulter*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: JKCoulter:apm

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1975 JUL -9 PM 2:31

COMMUNICATIONS
SECTION

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SECUNDERABAD 19 9 1610

July 9, 1975

Distribution:

Mr. Lejeune

BTBAFRAD

WASHINGTONDC

ATTN LEJEUNE PLEASE ADVISE SCHEDULE FOR ICRISAT SUB COMMITTEE

MEETING IF ALREADY FINALIZED REGARDS

CUMMINGS CRISAT SECUNDERABAD

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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

ICW/75

July 7, 1975

TO: Participants in International Centers Week
FROM: Executive Secretariat
SUBJECT: Commentary on the 1976 Program and Budget of the
International Crops Research Institute for the Semi-Arid
Tropics (ICRISAT)

Attached for information of members of the Consultative Group and of the Technical Advisory Committee is a paper giving the Secretariat's observations on the 1976 budget submission of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).

Attachment

The 1976 Program and Budget of the
International Crops Research Institute
for the Semi-Arid Tropics (ICRISAT)

Observations of the Consultative Group Secretariat

I. INTRODUCTION

1. This paper is provided by the Secretariat pursuant to the recommendations of the CG Subcommittee on Center Review Procedures. It is suggested that it be read in company with the Secretariat paper on ICRISAT presented for the 1974 Centers Week and with ICRISAT's own presentation of its 1976 program and budget proposals.

2. ICRISAT was created to improve the food supply of the 400 million people who depend on rain-fed agriculture in the semi-arid tropics, an area defined roughly within the belt of 400 to 1,200 mm of rainfall. The Center has two major objectives, one being the genetic improvement of two cereals (sorghum and millet) and three grain legumes (chick pea, pigeon pea and groundnut) and the other the development of principles for farming systems which will be applicable over a wide range of dryland environments in the semi-arid tropics.

3. The Consultative Group agreed to the TAC recommendation for the formation of ICRISAT in late 1971 and the Center was formally incorporated in July 1972. Since then staff recruitment has proceeded, temporary offices and buildings have been leased or constructed for the use of these staff, development of the farm, precision leveling, grading and the construction of dams has gone on apace; plans for the physical plant have been finalized and tenders let for a major part of the building program. It is expected that the buildings will be ready for occupation in 1977. At the same time plans have been made and funding obtained for a research program in West Africa.

II. PROGRAMS AND BUDGETS

1974 Program and Budget

4. The 1974 operational budget provision was \$2.6 million and expenditure \$2.4 million. Twenty-one positions were filled by the end of the year. The 1974 research program has seen an intensification of the 1972 and 1973 programs. Collection and classification of germ plasm of the cereals and grain legumes has been expanded; as an example about 9,000 lines of chick peas have been assembled and these are being screened for characters of value

in the breeding program. North Carolina State University will provide a comprehensive germ plasm collection of groundnuts. The breeding program on these crops, like that for the crops of the other centers, is directed towards varieties with higher yet stable yields through tolerance to drought, pests and diseases. The work on pigeon pea and chick pea, however, differs somewhat from that on other major crops inasmuch as information on basic crop physiology for these legumes is small, and the scientists have to build the generation of this information into the program.

5. Whilst research on genetic improvement of cereals and legumes can follow along well-defined paths, the work on farming systems has little previous experience to guide it. Because farming systems tend to be largely site specific it is difficult to generate general concepts from work carried out at a single center or a limited number of centers. While the objective, that of conserving scarce resources of soil moisture and rainfall and researching the best ways of utilizing these, is clear, ICRISAT's approach to it has been experimental, following several paths. The relationships of the farming systems program to irrigated agriculture, to the use of crops for which the Center does not have a mandate (for example cotton) but which are an essential part of some farming systems, and to livestock in West Africa, are being considered by ICRISAT management.

6. The economics section is looking at farming systems at a number of locations in India. These studies are expected to identify the physical, biological and social and economic constraints under which farmers operate. The section is also collaborating with the physiologist and biochemist in a survey of the availability of calories and protein in the semi-arid tropics. Results to date suggest that it is calories rather than protein which are inadequate and that the protein value of diets may not be seriously low even for the poor section of the population. This indicates that more emphasis will be needed on the digestible carbohydrates of the cereals.

Estimates for 1975

7. The operational budget for 1975 will remain within the original estimate of \$3.9 million, which includes the program for groundnuts recommended by TAC and agreed by the CG. There is a major increase (\$161,000 to \$332,000) in the Farming Systems budget over 1974, but a decrease for sorghum and millet from \$826,000 to \$518,000 over the same period.

Table I

Operational Core Budget -- 1974-76 (\$ millions)				
Major Activity	1974 (actual)	1975 (original)	1975 (revised)	1976
Research	1.416	1.534	1.741	2.364
Training and Conferences	0.033	0.293	0.252	0.358
Support Operations	0.564	0.700	0.791	0.977
General Administration	0.350	0.675	0.472	0.598
General Operations	0.453	0.165	0.431	0.317
Contingencies, including provision for future price changes	-	0.383	0.238	0.686
Adjustment*	_____	_____	_____	(0.400)
Total	2.816	3.750	3.925**	4.900

* The breakdown by major activities for 1976 is taken from ICRISAT's draft 1976 Budget. In the final 1976 Budget the total for these items is reduced by \$400,000 but the breakdown was not available to the Secretariat when this paper was written.

**Includes groundnuts.

8. On the capital budget, however, despite successful efforts to reduce overall prices by splitting the original bids, the final estimate for construction is \$3.6 million above the \$17.5 million allowed for in the original program of \$33 million for 1974-77 (operating and capital) set by the donors. If capital expenditure were to be kept within this \$17.5 million ceiling, it would be necessary to defer the construction of one laboratory block, one training hostel block and about half the housing for international and support staff. The Secretariat, in consultation with ICRISAT, has reviewed the capital needs and has recommended increasing the ceiling by \$2.2 million. The need for these additional funds, however, will not arise until 1977 and do not give rise in 1976 to a level of expenditure significantly higher than contemplated last year. The Secretariat has prepared an analysis of the capital program and the financial requirements which is being provided to members of the Group who are donors to ICRISAT.

Program and Estimate for 1976

9. The estimate for operational costs in 1976 is \$4.9 million (Table I) which compares with the original projection of \$4.8 million, including groundnuts, made in 1974 and the 1975 revised budget of \$3.9 million. The increase above the 1975 budget is accounted for by the addition of nine international staff positions and extra support staff to bring the 1976 staff to 37 with an estimated fill ratio of 88% (32.75 man-years).

10. The 1976 Program does not include any significant new initiatives in research. However, it should be noted that the 1974 Secretariat Review drew attention to the fact that, in the proposal for the addition of groundnuts, no provision had been made for additional buildings. This still remains the case. ICRISAT expects to accommodate the groundnut program within the planned building program even if that causes crowding.

11. Although there are no significant new initiatives, there are proposals for expansion of the existing programs, a major one being a non-core activity foreshadowed in the 1975 proposals; this is a cooperative program for West Africa, with staff located in Senegal, Upper Volta, Nigeria and Niger. Its projected cost is \$2.495 million for 1975-77 with ten scientific staff by 1977. This project includes \$209,000 for capital, but no estimate has been included for housing for international staff, the lack of which is often a major difficulty in outlying stations. Unlike outreach programs of other centers, this program will concern itself not only with trials of superior genetic material but also with development of improved farming systems in these areas. The ICRISAT teams will work in close collaboration with national programs and will develop models of farming systems along the same lines as those being developed at ICRISAT.

12. ICRISAT is also at various stages of negotiation for projects in Ethiopia, Tanzania, Thailand and Brazil. At the moment we do not know the proposed size of these programs nor the source of funding.

After 1976

13. Table II shows ICRISAT's projected operational costs beyond 1976. These show that the Center will require of the order of \$7 million for its operations in 1979.

Table II

Projected Costs -- 1977-79 (\$ millions)

	<u>1977</u>	<u>1978</u>	<u>1979</u>
Research	2.867	3.060	3.290
Training and Conferences	0.430	0.500	0.600
Support Operations	1.114	1.220	1.430
General Administration	0.720	0.775	0.930
General Operations	0.299	0.340	0.205
Contingencies, including price changes	<u>0.470</u>	<u>0.405</u>	<u>0.545</u>
Total	5.900	6.300	7.000

14. The proposed funding for research activities gives some indication of how ICRISAT's management sees these programs developing. Budgets for each research activity are set out in Table III.

Table III

Budgets for Research Activities -- 1974-79 (\$ '000)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Farming Systems	161	332	436	510	520	550
Sorghum and Millet	826	518	705	830	850	930
Chick pea and Pigeon pea	337	486	659	752	800	900
Groundnut	-	175	300	500	600	600
Agricultural Economics	76	145	161	164	170	180
Biochemistry - food technology, nutrition	16	85	103	111	120	130

15. This table shows that the farming systems program will remain at a rather modest level and that the work on grain legumes will account, eventually, for about 50% of the research budget.

III. ISSUES

16. The Secretariat suggests that there are several points which the CG may wish to note about ICRISAT. One concerns the rate of growth of staffing and the phasing of this in terms of accommodation. At the end of 1974 ICRISAT had 21 senior staff on site and is expected to have 30 by the end of 1975. The rented and temporary buildings now available for all the existing staff appear just adequate. By the end of 1976 the senior staff is expected to rise to 37 with a commensurate rise in other staff. Space will then be very tight. Lack of accommodation may also influence the optimum ratio of international to support staff. The recruitment rate of staff will also affect the rate of ICRISAT's farm development.

17. The size of the ICRISAT outreach program has already been commented upon. The Secretariat is informed that the staff of these programs will be recruited as part of ICRISAT's staff, i.e., they will be recruited on the same terms as core staff but stationed 'off-campus' and funded through special projects. The West African project, especially the farming systems part of it, is essentially long-term in nature, so that long-term employment of staff is essential. Because of its long-term nature and its relevance to ICRISAT's mandate it could be classified as an 'off-campus' core activity, needing core funding at some time in the future. The initiation of these West African outreach activities also raises the question of management of such activities, particularly their inter-relationship with other centers. ILCA will, of course, have a major interest in the West Africa region; the proposals for a project in northeast Brazil raise the question of whether it would not be sensible to give CIAT some responsibility in view of the long distances between ICRISAT and Brazil with consequent great expenses in travelling.

18. A further point concerns the rate at which outreach programs can be developed. The older centers have generally had some years of consolidation of their research work, before their 'off-campus' work began, usually in the form of collaboration with national programs on testing the Center's improved materials.

19. ICRISAT's strategy for outreach programs seems to confirm a tendency which is appearing at other centers; this is the increasing emphasis on selection for local adaptability. In their earlier work on genetic improvement, the centers laid great stress on the virtues of breeding for wide adaptability. Whilst this remains part of their strategy, the virtues of selection for local adaptability are being increasingly emphasized.

Budget Issues

20. ICRISAT plans to remain within its planned expenditure for operational core so that no issues arise in this. The capital budget is discussed in a separate paper presented to the Group.

July 7, 1975

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U. S. DEPARTMENT OF AGRICULTURE

CLERK

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Distribution: Mr. Pittsford

Recd July 3, 1975

July 3

MEMORANDUM TO CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL

MEETING

AND WITNESS: MR. PITTSFORD

HAVING BEEN REQUESTED TODAY AND LIAISON OF PROPOSAL TO DEFER
MEETING DURING FROM 24 JULY TO 2 AUGUST. I WOULD LIKE YOU TO
ADVISE US OF ANY FIRST DRAFT DECISIONS TAKEN AT
THIS MEETING. SUCH DECISIONS SHOULD BE AVAILABLE FOR FURTHER PRELIMINARY
DISCUSSION. MEETING SHOULD BE HELD AT EARLIEST POSSIBLE DATE
ON 24 JULY. PLEASE CONTACT SECRETARY TO MEET WITH ME
ON 24 JULY. ALL WILL BE ATTENDING MEETING.

Very truly,
Mr. Pittsford

cc: Mr. Pittsford

COPY

July 4-7
INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS

1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

July 2, 1975

Mr. Paal Bog, Director
Planning Department
Norwegian Agency for International Development
Boks 8142 Oslo Dep
Oslo 1, Norway

Dear Mr. Bog:

I wish to acknowledge with grateful appreciation receipt of your letter No. J.I. 3508/75 PB/Kgn dated June 24, 1975 informing us of the completion of the arrangements for the transmittal of the Norwegian Government's contribution to ICRISAT for 1975. I wish to take this opportunity again to thank you most sincerely for your government's support. Your sustained support has made a major contribution toward enabling the Institute to move ahead positively and rapidly in the development of its program toward acceleration of progress in food production in rainfed areas of the semi-arid tropics.

With highest regards, I am,

Sincerely yours

RWC
Ralph W. Cummings
Director

cc: Mr. Michael Lejeune ✓

RWC:jg



July 4-7
INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

July 2, 1975

Mr. Michael Lejeune, Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. Lejeune,

In the schedule of events for International Centers Week, I would appreciate knowing, as soon as you have been able to work it out, the time at which you anticipate having the meeting of the ICRISAT Subcommittee to consider the ICRISAT capital budget and budget ceilings.

With best wishes,

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

RWC:jg

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INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
ICRISAT



Phone: City Office: 7587, 7525
Laboratory: 75015
Fax: 75015
Grama: ICRISAT, SECUNDERABAD
Telex: ICRISAT 518 585

CITY OFFICE:
1-75-585 Secunderabad
Hyderabad-500015, A.P., India

July 2, 1975

Mr. Michael Lejeune, Executive Secretary
Consultative Group on Int'l Agri. Research
1818 H. Street, N.W.
Washington, D.C. 20432
U.S.A.

Dear Mr. Lejeune,

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to work it out, the time at which you anticipate having the
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With best wishes,

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

RWC:jg

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INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

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C.G.

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

July 1, 1975

The Executive Secretariat
Consultative Group on International Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Gentlemen:

I wish to acknowledge with thanks receipt of your memorandum of June 20, 1975 enclosing your updated Calendar of Events for 1975. I regret to note from this that we have not kept you properly advised on changes in ICRISAT's schedule. Please note the following corrections:

1. The May meeting of the Executive Committee was May 22-24 instead of May 29-31.
2. The UNDP/FAO Policy Advisory Committee is now scheduled September 8-10 instead of 15-18. This will be a joint meeting with the CIMMYT/UNDP/FAO Policy Advisory Committee.
3. With respect to seminars and workshops the sorghum and millet improvement consultation was held during the period April 14-19, 1975.
4. The consultation on Biology and Control of Downy Mildew and Ergot in Millet will be held October 1-3, 1975.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

INCOMING MAIL UNIT

1975 JUL 10 PM 3 44

RWC:jg

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Ralph W. Cummings
Director

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AT ICRISAT

July
August
September 1975

International Crops Research Institute
for the Semi-Arid Tropics

Hyderabad
A.P., India

Economics Program Supports ICRISAT's Objectives

Economic studies at ICRISAT are aimed at helping the Institute achieve its overall mandate to contribute to agricultural development in the semi-arid tropics.

To achieve that aim, Economists J. G. Ryan (Australia) M. von Oppen (Germany) and H. P. Binswanger (Switzerland)—together with Associate and Assistant Economists N. S. Jodha and H. S. Sandhu (India), three research associates and 11 field investigators — have launched a series of supportive studies which provide guidelines to other ICRISAT programs.

In addition, the group has started a number of interrelated independent studies. Data has begun pouring in, for example, from village-level studies started in May. Processing is underway and already increasing understanding of farmer behavior and motivation. Approximately, 250 residents of villages participating in the study visited the ICRISAT experiment station in September.

Studies are also being conducted on village irrigation ponds; water harvesting and supplementary irrigation at the state, regional and national levels; and marketing of agricul-

See 'ICRISAT Economics', back page

UNDP Policy Advisory Committee to CIMMYT and ICRISAT Meets at Hyderabad

The United Nations Development Program (UNDP) supports projects at the International Maize and Wheat Improvement Center (CIMMYT) and at ICRISAT. This year the Policy Advisory Committees met together in Hyderabad as a single body to review the UNDP-supported projects at both World Centers.

On September 8, Dr. E. W. Sprague, director of the maize program, and three CIMMYT colleagues outlined their Institute's projects. The following day was reserved for review of the UNDP-funded research program on sorghum and millets

at ICRISAT and the newly initiated work on these crops in West Africa.

The Committee provided the ICRISAT cereals team with recommendations on topics ranging from pest and disease resistance to grain quality and international cooperation, training programs and seminars. The group reported that the joint-meeting approach allowed greater insights into the programs at both Centers and represents a useful technique for achieving greater collaboration in the global effort to increase food production.

UNDP Committee in Working Session



Research Highlights

Sorghum

The 1975 monsoon season has brought substantial progress to the sorghum improvement program. Although the program is only entering its third year of operations, some of the advanced materials have completed their sixth generation and second cycle of recurrent selection.

An extensive trials program was conducted at the Hyderabad headquarters this season; a series of cooperative trials in India and four international trials were also begun this year. Unusually wet conditions at Hyderabad at harvest time allowed selection for grain mold resistance. Through techniques developed here, ICRISAT pathologists have identified two lines in the germplasm collection which are resistant to the two most virulent mold fungi.

Projects Approach

In addition to this season's composite population and trials work, a series of breeders' projects and interdisciplinary projects have brought the program closer to achieving basic objectives in several areas of concern. ICRISAT entomologists, pathologists, physiologists and biochemists have cooperated with breeders in projects for pest resistance, disease resistance, efficient plant design and grain quality.

Breeding projects include short term photoperiod insensitive plants with high quality, mold resistant grains; grain grass sorghums; striga resistant sorghums; and superior cultivars for high altitudes, West African conditions and East African conditions. Although considerable variation is expected in

the time required to achieve primary and secondary objectives in these studies, the project approach is simultaneously generating useful data on a large number of production factors.

Male Sterility

What appears to be a new genetic male sterile has been discovered among the ICRISAT-assembled materials. While further crosses are required to confirm the finding, early signs are optimistic. Last year a plant demonstrated male sterility. The line was sibbed, the F_1 was fertile, and the F_2 appear to be segregating in a Mendelian manner.

Pearl Millet

Incorporating disease resistance into superior agronomic types is the major challenge of the pearl millet breeding program. This season provided ample opportunity to face that challenge.

With a number of nurseries at co-operating centers in India, international trials, and almost continuous rain in September at Hyderabad, conditions were favorable for studying susceptibility of a wide range of material to several diseases under diverse conditions.

Ergot, Smut and Downy Mildew

A severe ergot attack at ICRISAT headquarters enabled pathologists and breeders to critically examine large quantities of exposed materials. Smut occurred both at ICRISAT headquarters and to an even greater extent in co-operative nurseries. The downy mildew

"sick plot" was well-established with high levels of infection this year. To supplement these natural and man-made incidence levels, artificial inoculations were made on materials under special scrutiny.

Total Exposure

Through these "total-exposure" methods, ICRISAT millet breeders are moving closer to a major program objective: to incorporate as much genetic resistance as possible against the diseases which so significantly restrict production of this staple.

The procedure has also begun to pay knowledge dividends. The international trials of ICRISAT materials grown in Africa this season demonstrated that the genotype susceptibility pattern is very different between continents and regions. Materials which are quite susceptible to downy mildew in India, for example, showed a high degree of resistance at Bambey, Senegal. Conversely, materials which are resistant in India suffered from fairly severe attacks at Bambey, though some showed a level of resistance at both locations.

Pigeonpea

Planting of the main-season crop of pigeonpea was completed in July. Routine crossing work and observations on the various trials proceeded on schedule.

Unusually heavy rains in September, however, produced distinct genetic responses to waterlogged soil. Counts of dead or apparently dead plants were taken in almost all the

Research Highlights

populations. Although breeders have only occasional opportunities to select for waterlogging tolerance, this season's rainfall pattern and the resulting crop response demonstrated the need for further investigations.

Related Studies

Observations on obtuse leaf plantings from seed produced last season in multiple row blocks indicated outcrossing with normal leaf types was well below one percent.

Screening of germplasm lines for protein content and resistance to sterility virus continued.

Chickpea

In August ICRISAT plant breeders were selecting desirable chickpea types at about sea level in the Middle East and concurrently making crosses at 10,000 feet in the Himalayas. Procedures have now been established for the simultaneous management of the chickpea program in two off-season nurseries at Beirut, Lebanon and the Lahaul Valley in northern India.

Research staff remain in residence at both locations. At key times senior breeders and collaborating scientists join the resident team members to make observations and carry out crossing and selection work.

The Beirut material was all harvested by September 14. Work in Lahaul Valley is continuing.

Related Studies

The germplasm program in chickpeas – including collection and survey trips – is well-advanced. Pathology, entomology, physiology and nutrition investigations on off-season materials will intensify on the post-monsoon crop at Hyderabad.

Farming Systems

The Farming Systems program entered its third year of operations this season with an expanded array of investigations and experiments. Newly developed red soil

watersheds were included in the resource evaluation studies for the first time this year.

Projects in the Farming Systems program are interrelated and carried out by scientists of varying specializations who work together as a team. However, a listing of highlights by discipline gives a view of the extensive scope of this season's activities:

Agroclimatology: A large number of additional raingauges, and improved procedures facilitated data collection. September rainfall was 422.3mm, the highest amount recorded for a single month since the establishment of ICRISAT in 1972.

Hydrology/Land and Water Management: Automatic sediment sampling devices and other new instruments yielded valuable data. September rainfall not only broke records for a monthly total but also for daily total (Sept.9) and peak intensity storm (Sept.24). Nevertheless, the black soil ridge and furrow system and red soil broad bed and furrow system withstood the storms with each furrow carrying runoff from its own mini-catchment area to the grassed waterway. Studies on runoff patterns between different soil management systems and storage facilities also continued this season.

Soil Physics, Chemistry and Fertility: Soil moisture, bulk density and infiltration measurements; land preparation methods; rooting patterns; and extensive fertilizer trial data are being analyzed and reviewed.

Agronomy: This year's agronomy studies provided data on intercropping, relay cropping, ratooning, multiple cropping, genotype evaluations and weed ecology and management.



ICRISAT Pigeonpea Breeder Dr. J. M. Green examines a dwarf type with large seeds developed by West Indian plant breeders

tural products in the semi-arid tropics.

The economists describe their operations and goals in relation to their counterparts in industry. Corporation economists often work as members of a product development team, insuring that the goods manufactured are tailored to the needs and tastes of consumers.

"At ICRISAT our product is agricultural technology," the economists point out, "and we hope to assist in the effort to keep ICRISAT research pragmatically oriented towards the village and the real-life conditions of the farmer."

Trainees' Program Nears Completion

Eight Nigerian agricultural officers have nearly completed their training program at ICRISAT. They have harvested their demonstration plots and in October will begin a 16-day, 3,755-kilometer study tour of the semi-arid regions of Karnataka and Maharashtra.

ICRISAT welcomed seven new staff members recently.

Mr. F. J. Bonhage joined earlier this year as Construction Supervising Officer. He was formerly with the architectural firm of B. N. Deschler Assoc., New York. Mr. Bonhage has extensive construction supervision experience in the U.S.A. and Africa.

Dr. C. Charreau has been deputed by the Institute de Recherches Agronomiques Tropicales et des Cultures Vivrieres (IRAT), Paris, to serve as Resident Director, West African Program. Dr. Charreau recently spent a year as Visiting Professor of Agronomy at Cornell Univ. and has had extensive experience in West Africa. He met with ICRISAT staff at the Institute's Hyderabad headquarters from July to mid-September and will be setting up a regional office for the West African program in Dakar, Senegal.

Mr. S. A. Clarke joined on July 4 as Field Trials Officer for assignment to ICRISAT's West African program. He

recently completed graduate studies at the Univ. of Minn. and has worked in agricultural development in West Africa previously. Mr. Clarke spent two months at ICRISAT's Hyderabad headquarters for orientation and will spend additional orientation time at regional research stations in West Africa before being posted to Bamako, Mali.

Dr. R. C. McGinnis assumed the post of Associate Director for Cooperative Programs and Training on August 19. He was formerly Director of the Plant Breeding Station, Njoro, Kenya and head of the Plant Science Department, Univ. of Manitoba.

Dr. R. J. Williams joined as Plant Pathologist for Cereal Crops on September 13. He was formerly Plant Pathologist at the International Institute for Tropical Agriculture (IITA), Ibadan, Nigeria.

Dr. P. J. Dart assumed the post of Microbiologist on September 23. He was formerly Principal Scientific Officer, Soil Microbiology Dept., Rothamsted Experimental Station, England.

Dr. J. W. Estes joined as Computer Services Officer. He recently completed graduate studies in Computer Science at the Univ. of Conn. Dr. Estes served on a short assignment at ICRISAT in June.

Trainees Harvest Demonstration Plots



ICRISAT Training Officer Dr. D. L. Oswalt counsels Nigerian Trainees (L-R) C. S. Samban, U. Faragai, C. I. Akamiro, S. Agabus, G. Gusau, M. Daniel, O. Kyari and A. M. Zurmi as they harvest demonstration plots on the Institute's experiment station



INTERNATIONAL CROPS RESEARCH
INSTITUTE FOR THE
SEMI-ARID TROPICS - ICRISAT

1-11-256, Begumpet,
Hyderabad-500016, A.P., India

New Delhi Liaison, 55 Lodi Estate, Ph-615931

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Dr. J. S. Kanwar - Associate Director

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ZCZC 248423 RC009 PDF1 4 RMF3593 KNY470 BS301/27

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SECUNDERABAD 45/44 27 1415

June 27, 1975

cc: Gwen

Mr. Ritchie
6/30/75
Gene

1975 JUN 28 AM 11:37

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Mr. Lejeune ✓

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June 28, 1975

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ATTENTION LEJEUNE REURCAB 1976 CORE BUDGET 2.36 MILLION

RESEARCH 0.34 TRAINING AND CONFERENCES 0.98 SUPPORT OPERATIONS

0.58 GENERAL ADMINISTRATION 0.32 GENERAL OPERATIONS AND 0.32

CONTINGENCIES OPERATIONS AND 0.32 CONTINGENCIES STOP REGARDS

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June 27, 1975

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From: New Delhi

Mr. Kraske

434 FOR KRASKE

1975 JUN 27 AM 8:04

67

I HAVE BEEN ASKED BY ICRISAT TO BECOME MEMBER OF ADVISORY
PANEL COMPOSED OF DISTINGUISHED LEADERS EXPERIENCED IN PERSONNEL
MANAGEMENT TO PREPARE REPORT ON ALL ASPECTS OF PERSONNEL POLICIES
FOR LOCALLY RECRUITED STAFF. REPORT MUST BE READY BY MID AUGUST.
ASSUME WILL REQUIRE CONSIDERABLE TIME AND WORK AND MY REACTION IS TO
REGRET INABILITY SINCE AM ALREADY OVERLOADED. HOWEVER SOMEONE IN
BANK OR CONSULTATIVE GROUP MAY WISH ME TO PARTICIPATE. PLEASE
WOULD YOU ENQUIRE AROUND AND ADVISE ME HOW TO REACT

REGARDS

NAYLOR



G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

June 27, 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

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

Dear Mr. Lejeune :

FILED BEHIND 1972/74 G-7 FIVE

*FILED BEHIND
1975/77 G-7 FILE*

With further reference to our cable, I am enclosing herewith one copy each of our 1976 Budget and Program Proposal, Annual Report for the year 1973-74 and our Financial Report for the year ending December 31, 1974. As indicated in our earlier letter of June 24th, the bulk copies of the above material for use by the CG Secretariat at the ICW meetings have been sent by air freight to the USA and the Institute of International Education, New York, will be forwarding them to your office. I hope these will be in your office by early next week.

*FILED BEHIND
1972/74 G-7 FIVE*

With highest regards, I am,

Sincerely yours,

Ralph W. Cummings
Ralph W. Cummings
Director

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



Phone: City Office : 15031, 15032
Laboratory : 15033
Farm : 15034
Cable: ICRISAT, DEWUNDERABAD
Telex : ICRISAT 016-388

CITY OFFICE :
1-11-286, Bagmari,
Hyderabad-500016, A. P., India.

June 27, 1975

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

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With highest regards, I am,

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Ralph W. Cummings
Director

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TO: CUMMINGS
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DATE: JUNE 26, 1975

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(Ext. 3592)

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Cable No.:

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INTO FOLLOWING ITEMS COLON RESEARCH, TRAINING AND CONFERENCES, SUPPORT
OPERATIONS, GENERAL ADMINISTRATION, GENERAL OPERATIONS, AND CONTINGENCIES
INCLUDING PROVISION FOR FUTURE PRICE CHANGES REGARDS

LEJEUNE

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AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE *[Signature]*
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BOMBAY

COUNTRY: INDIA

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INCLUDING PROVISION FOR FUTURE PRICE CHANGES REGARDING

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DATE OF DISPATCH REGARDS

LEJEUNE

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AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

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Telex : ICRISAT 015-366

CITY OFFICE:
1-11-256, Begumpet,
Hyderabad-500016, A. P., India

June 24, 1975

Mr. Michael Lejeune
Executive Secretary, Consultative Group on
International Agricultural Research
1818 H Street, N. W.
Washington, D. C. 20433
USA

Dear Mr. Lejeune :

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Ralph W. Cummings
Ralph W. Cummings
Director

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INTERNATIONAL CROPS RESEARCH INSTITUTE
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Telex : ICRISAT 015-388

CITY OFFICE :
Y-11-388, Begumpet,
Hyderabad-500016, A. P., India

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Sincerely yours,

Ralph W. Cummings
Ralph W. Cummings
Director

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WOULD YOU INDICATE THE EXTENT TO WHICH A DONOR MEMBER OF CGIAR
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INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

G-7

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Mr. Michael Lejeune
Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433

June 14, 1975

Dear Mr. Lejeune,

I am forwarding herewith my comments and suggestions for the draft Ruddy-Coulter report of April 28 and on the partial draft paper entitled "Secretariat Commentary on ICRISAT" dated May 1, 1975. I have identified these comments and suggestions by the numbers used in the drafts furnished to me on May 6. My comments reflect not just the situation in which we found ourselves at the time of the Ruddy-Coulter visit in March but include changes we have made subsequently in light of these comments, our discussions in Washington, and the reactions and suggestions of the Board's Executive Committee.

I am most grateful for the constructive approach taken by Mr. Ruddy and Mr. Coulter in their visit here, in the discussions with them and you in Washington, and in the draft papers prepared. I feel that they and you have taken a constructive approach in attempting to understand fully the real requirements of the Institute and to help us work out a fully supportable position to the CGIAR.

You will note that we have held the basic operational budget to a total of \$15.65 million for the 1974-77 period. (The additional groundnut program will be stretched out a little and we are now requesting only \$975,000 for this program through 1977 instead of the \$1.4 million suggested in the Ruddy-Coulter report.)

Our total expenditures for operating and capital expenses in 1974 came to \$3.8 million. Requirements under the present ceilings are estimated at approximately \$9.12 million for 1975, \$11.34 for 1976 and \$9.71 for 1977, with \$0.13 million in capital carried forward to 1978. This includes an unallocated contingency reserve of \$1.67 million which we hope may prove ample. We cannot be sure how world and local events may affect labour wages or prices of materials in the later stages of construction, however, and wish to assure that we can complete those units which are started.

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
ICRISAT



Phone: City Office: 32081 32328
Laboratory: 32029
Farm: 32876
Grams: CRISAT, SECUNDERABAD
Telex: ICRISAT 018-386

CITY OFFICE
1-11-1982 Hyderabad
Hyderabad-500002 A.P., India

June 14, 1972

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Executive Secretary
Consultative Group on Int'l Agri. Research
1815 N. Street, N.W.
Washington, D.C. 20433

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RECEIVED

Mr. Michael Lejeune
Washington, U.S.A.

2

June 14, 1975

You will note that we began the year 1975 with a balance of \$4.18 million in cash and \$764,000 in purchased building materials in our capital account. Assuming the provision of \$8.255 in new donations for 1975 as indicated in the letter from Mr. Graves dated November 21, 1974, we should get through 1975 satisfactorily and enter 1976 with a reasonable balance in our capital account. 1976 and 1977 may prove to be a little tighter but I hope not insoluble. An addition of \$2.0 million to our ceiling amounts would go a long way toward enabling the Institute to complete its capital development program. This would not meet the \$2.86 estimated additional requirement for the 1974-77 period. If we should be fortunate in not requiring the full amount reserved for contingencies, or if we should be able to realize more income internally, these sources may be able to help toward closing the gap. You will also note that our full program estimates a capital requirement of \$769,000 for 1978.

Again, we are most grateful to you and your associates for your understanding and for your very constructive and helpful approach toward meeting the requirements for ICRISAT's continued development and progress.

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

Encl:

RWC:jg

Comments and Suggestions on
"Secretariat Commentary
on ICRISAT" - draft May 1, 1975

PARA

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The increase above 1975 is -----

Staff positions	-	1976	-	37
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fill ratio	-			88%

The last two sentences can be omitted. Our present proposed operational budget for 1976 is only 975,000 above the 1975 figure.

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The present proposal, following your suggestion to reconsider the schedule of staff recruitment, calls for filling a total of 37 positions through 1976, including 3 for groundnuts.

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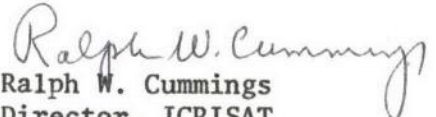
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14. We recognize the problem. We felt that the urgency of the existing situation justifies extra effort to accelerate development of cooperative programs, away from the main center.

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NB: Point 15 is the end of the portion of the draft given to me on May 6

I wish to compliment the secretariat on the very constructive and positive approach taken in this paper.


Ralph W. Cummings
Director, ICRISAT

COMMENTS ON DRAFT "ICRISAT - REVISION
OF 1974-77 OPERATING AND CAPITAL
BUDGET" BY RUDDY AND COULTER
APRIL 28, 1975

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2. Actual operating total for 1974 was 2.4 instead of 2.8.
This would change total this column and last three columns
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wishes to propose a\$ basis for revision of the last two
columns of table 2.
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board and the management have agreed to retain the operating
/exclusive of groundnuts,
budget, At the previously established figures of 15.65 million
for the four year period - 2.4 - 3.75 - 4.6 - 4.9 - and to
stretch out the schedule of recruitment slightly so as to
reserve any additional funds for completion of the physical plant.
7. As now re-scheduled, the estimated full capital program would
require 20.2 million for the 1974-77 period with 0.8 million to be
carried forward to 1978.
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estimates were made.
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I don't think we can spare the equipment as early as 1976.
12. OK
13. We do not agree that the plant is greatly overdesigned.
The high bid costs are disappointing.
14. And table 3. Please see our revised table for cost of items contracted. We have included the cost of owner purchased materials along with the actual civil, electrical, plumbing and air conditioning costs for the buildings contracted for.
15. The housing situation appears to us tighter and more critical than is suggested here.
16. We agree to a reduction in the item on equipment and furnishing to 4800. Recommendations on scientific equipment, tractor and field equipment, office equipment and ground equipment are accepted.
We suggest reducing furniture by 80 thousand. The computer questions was discussed when I visited Washington and we indicated the need for going immediately to a small computer rather than the programmable calculator as recommended by the Ross report. In fact the Ross report suggested that this might be necessary if we were unable to buy adequate service from outside sources.

We are unable to reduce the vehicle estimate. This includes a substantial group of light lorries and trucks for field service, passenger cars, and a number of buses and mini buses for transporting staff to and from the work sites, most of the staff live in Hyderabad and the ICRISAT center is 17 miles out.

16. Cont'd

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17. The kitchen equipment item includes air conditioners for temporary office and laboratory buildings and kitchen and dining equipment for the main dining center as well as the workers canteen. We are exploring all avenues possible for economy, including possible changes in space utilization, to permit use of more of standard units which do not have to be made to order. We are not optimistic that we can make much savings in this item but will continue to explore. We are a bit dismayed at the idea of sacrificing sanitation standards for the area concerned. The best we can possibly do is often not good enough.

18. We have actually increased the contingency item above the amount suggested by you. We don't know which way costs may move. In recent months, the rate of inflation has eased somewhat but some measures being urged may change the trend again and we feel we should hold a reasonably comfortable unallocated contingency fund.

19. See other sections and our revised estimates.

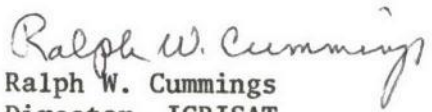
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Please note that we have reduced our estimate on the rate of development of the groundnut program. We now plan only \$ 975,000 for the 1975-77 period, instead of \$ 1,400,000 suggested in the report.

We regret to report that the Kresge contribution did not come through.

We had been informed earlier that we might expect 8.255 million contribution for 1975, instead of 8.0 as shown in table 6. Our carryover balance, allocated to the capital fund, was greater than you had indicated.

22. We cannot comment on this without information on grants for 1976 and additional capital allocations which may be obtained this year or next toward completion of the physical plant. At least there appears to be no fund availability problem in 1975 and we hope the 1976 and 1977 needs can be met.
23. We shall be most grateful for your assistance in these matters. We hope that we have provided the information necessary to enable you to make the case for the Institute. The exercise has been a very useful one for us, having necessitated our much closer examination of every item in the plan than we had been able to do previously.


Ralph W. Cummings
Director, ICRISAT

Summary of ICRISAT's Projected Financial Requirements thru 1978 (as of June, 1975)
(Figures in thousands US Dollars)

Capital	Total 1972-78	1972-73 Expenditures	1974 Expenditures	1975	1974-77			1978
					1976	1977	Total 1974-77	
Site Development (Land survey, land shaping, irrigation systems and equipment, tank reclamation, fences, unpaved roads, relocations of power and telephone lines, temporary structures, etc.)								
	1,144	340	78	375	251	100	804	-
External Works and Services (Earth movement and grading for building areas, primary utility connections and distribution, potable water storage, treatment and distribution, sewer system, electric substation and standby generators, telephone and radio communication systems, gas services, paved roads, drainage systems, etc.)								
	2,157		36	790	845	486	2,157	
Building Construction (Farm and physical plant services, workers canteen, crop work area with drying facilities and refrigerated seed storage, utility services, two laboratory blocks, one dormitory for trainees, one unit flatlets for married trainees and visiting scholars,								

Capital	Total 1972-78	1972-73 Expenditures	1974 Expenditures	1974-77			Total 1974-77	1978
				1975	1976	1977		
trainee classroom center, dining center, administration building, auditorium, library, first phase staff housing, plant growth facilities with screen houses and glass houses, warehouses, gate house)	7,829			2,120	3,927	1,657	7,704	125
Architectural, supervision, etc. (Construction supervision, landscaping and miscellaneous)	1,200	261	206	370	220	143	939	-
Equipment, furniture and furnishings (Scientific instruments and equipment, office, library, auditorium, classroom and hostel furniture, vehicles, tractors and field equipment, communication and audiovisuals, computer, calculators, office equipment, dining and kitchen equipment, laundry equipment, tools and shop equipment, books and publications, etc.)	4,800	719	1,081	1,340	700	960	4,081	-
Contingencies	1,665			200	500	965	1,665	-
Total (under 1974 ceiling)	18,795	1,320	1,401	5,195	6,443	4,311	17,350	125
Additional needed	(3,500)	-	-	(150)	(1,200)	(1,506)	(2,856)	(644)*
Grand total:	22,295	1,320	1,401	5,345	7,643	5,817	20,206	769

*Comprises of building construction \$294, architectural supervision etc. \$100, and contingencies \$250.

Capital	Total	1972-73 Expenditures	1974-77				Total 1974-77	1978
			1974 Expenditures	1975	1976	1977		
<u>Operating</u>								
Required for operating budget, excluding groundnut			2,398	3,750	4,600	4,900	15,648	5,700
Groundnut Program				175	300	500	975	600
			<u>2,398</u>	<u>3,925</u>	<u>4,900</u>	<u>5,400</u>	<u>16,623</u>	<u>6,300</u>
=====								
Balance on hand as of Jan 1, 1975								
Operating reserve		\$ 440					
Cash - Capital account		4,184					
Inventory of building materials		764					

Ralph W. Cummings
Director



Central Files - G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 38029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Mr. Michael Lejeune
Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433

June 14, 1975

Dear Mr. Lejeune,

I am forwarding herewith my comments and suggestions for the draft Ruddy-Coulter report of April 28 and on the partial draft paper entitled "Secretariat Commentary on ICRISAT" dated May 1, 1975. I have identified these comments and suggestions by the numbers used in the drafts furnished to me on May 6. My comments reflect not just the situation in which we found ourselves at the time of the Ruddy-Coulter visit in March but include changes we have made subsequently in light of these comments, our discussions in Washington, and the reactions and suggestions of the Board's Executive Committee.

I am most grateful for the constructive approach taken by Mr. Ruddy and Mr. Coulter in their visit here, in the discussions with them and you in Washington, and in the draft papers prepared. I feel that they and you have taken a constructive approach in attempting to understand fully the real requirements of the Institute and to help us work out a fully supportable position to the CGIAR.

You will note that we have held the basic operational budget to a total of \$15.65 million for the 1974-77 period. (The additional groundnut program will be stretched out a little and we are now requesting only \$975,000 for this program through 1977 instead of the \$1.4 million suggested in the Ruddy-Coulter report.)

Our total expenditures for operating and capital expenses in 1974 came to \$3.8 million. Requirements under the present ceilings are estimated at approximately \$9.12 million for 1975, \$11.34 for 1976 and \$9.71 for 1977, with \$ 0.13 million in capital carried forward to 1978. This includes an unallocated contingency reserve of \$1.67 million which we hope may prove ample. We cannot be sure how world and local events may affect labour wages or prices of materials in the later stages of construction, however, and wish to assure that we can complete those units which are started.

Mr. Michael Lejeune
Washington, U.S.A.

2

June 14, 1975

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Cash - Capital account		4,184					
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Ralph W. Cummings
Director

INCOMING

CABLE

File 11-7

RECEIVED

1975 JUN 14 AM 11:15

COMMUNICATIONS
SECTION

*Mr. Ritchie has
a copy*

ZCZC 248423 RC026 PDG1085 RME3518 KNY394 BS266/14

URWT CO INBX 058

SECUNDERABAD 58 14 1200

June 14, 1975

Distribution: Mr. Lejeune

INTBAFRAD

SHINGTOND

Mr. Coulter

*I would appreciate
knowing as soon as possible
whether this information and
the information comes previously
is so much it varies with
your and
Luddy's re-*

ATTN LEJEUNE ICRISAT CAPITAL REQUIREMENTS UNDER PRESENT CIELINGS
AND COMMITMENTS ESTIMATED 5195 COMMA 6443 COMMA 4311 AND 125 TMOKSAND
DOLLARS 1975 COMMA 1976 COMMA 1977 AND 1978 RESPECTIVELY STOP FULL
CAPITAL PROGRAM WOULD ADD 150 COMMA 1200 COMMA 1506 AND 644 THOUSAND
RESPECTIVELY FOR SAME YEARS STOP LETTER WITH FULL DETAILS FOLLOWS

REGARDS

CUMMINGS CRISAT SECNDERABAD

CC: Mr. Ruddy

*command -
about as
to give
us a
problem*



Record Removal Notice

The World Bank Group
Archives
& Records Management

File Title CGIAR - G-7 - International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) - Correspondence 75/77-01		Barcode No. 1760851		
Document Date 13 June, 1975	Document Type Letter			
Correspondents / Participants To: G. Derkinderen From: Ralph W. Cummings				
Subject / Title Support for 1975 to International Crops Research Institute				
Exception(s) Financial Information iv				
Additional Comments		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
		<table border="1"><tr><td>Withdrawn by Sherrine M. Thompson</td><td>Date March 26, 2021</td></tr></table>	Withdrawn by Sherrine M. Thompson	Date March 26, 2021
Withdrawn by Sherrine M. Thompson	Date March 26, 2021			

INCOMING

1975 JUN 13 AM 3:09
CABLE

G 70

cc on

Distribution:

Mr. Lejeune

ZCZC 248423 RC052 PDC1494 RMF3507 KNY075 BS371/12

URWT CO INBX 179

SECUNDERABAD 179/174 12 1515 PAGE 1/50

June 12, 1975

INTBAFRAD

WASHINGTON

LEJEUNE HAVE NOW COMPLETED BOUGHT DOCUMENT FOLLOWING BOARD
EXECUTIVE COMMITTEE REVIEW STOP GROUNDNUT PROGRAM NOW TOTALS
OLLARS 975 THOUSAND 1975-1977 TOP BOARD REQUESTED HOLDING
OPERATING BUDGET TO DOLARS 15.65 MILLION PLUS GROUNDNUT 975 THOUSAND
FOR 1974-77 PERIOD STOP YEARLY TOTALS OPERATING BUDGET REQUESTS
INCLUDING GROUNDNUTS NOW 2.4 MILLION

~~COL 975 1975-1977 15.65 1974-77~~

~~ALSO 975 2.4~~

~~BS371/12 PAGE 2/50~~

1974 3.925 MILLION 1975 4.9 MILLION 1976 AND 5.4

17.35 MILLION 1977 STOP HAVE RECALCULATED CAPITAL BUDGET 1974-77 FOR
17.35 MILLION WITH SEPARATE TABLE GIVING COSTS FOR OTHER
ITEMS TOTALLING 3.5 MILLION AND REQUESTING CONSIDERATION
ADDITIONAL AMOUNTS STOP 17.35 MILLION COVERS SITE DEVELOPMENT COSTS
EXTERNAL WORKS EQUIPMENT ALL CONSTRUCTION ITEMS THROUGH

~~COL 1974 3.925 1975 4.9 1976 5.4 1977 1974-77 17.35 3.5 17.35~~

~~BS371/12 PAGE 3/50~~

NUMBER 15 OF PRIORITY LIST SENT YOU 21ST JANUARY
ARCHITECTURAL AND SUPERVISORY COSTS WITH 1.7
MILLION UNALLOCATED RESERVE AND CONTINGENCIES STOP HAVE
ALSO ESTIMATED CASH FLOW REQUIREMENTS BY YEARS AND AM FORWARDING
THIS ESTIMATE TO YOU BY MAIL TODAY STOP HAVE MADE
SOME REDUCTIONS EQUIPMENT ESTIMATES BUT UNABLE
REACH LEVELS

~~PAGE 4/24~~

RECOMMENDED COULTER RUDDY REPORT STOP WILL MAIL SUMMARY
SOON AS POSSIBLE STOP WILL SEND DOCUMENTS TO MAILING LIST AS
REQUESTED REGARDS

CUMMINGS CRISAT BECINDERABAD

ROYAL MINISTRY
FOR
FOREIGN AFFAIRS

Stockholm, June 10, 1975

G7 ✓
cc: D 19

Mr Ralph W. Cummings, Director
International Crops Research Institute
for the Semi-Arid Tropics
1-11-256 Begumpet
Hyderabad - 500016
India

Dear Mr Cummings,

With reference to your letter of May 20, 1975 I have the pleasure to inform you that the Swedish Government has decided to transfer the equivalent in US dollars of 5 700 000 Swedish crws, which constitutes the Swedish contribution in full to ICRISAT for 1975, to your account at the First National City Bank in New York.

Sincerely yours,


Ulf Hjertonsen

cc. M. Lejeune, CGIAR

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: JUNE 9, 1975

CLASS OF
SERVICE: ~~Telex No. 015-366~~ *LT/R*

Ext. 3592

COUNTRY: INDIA

TEXT:
Cable No.:

PLEASE ADVISE DATE OF DISPATCH YOUR COMMENTS ON ALPHA COULTER RUDDY
REPORT AND BETA DRAFT SECRETARIAT COMMENTARY ON 1976 BUDGET STOP WE
MUST FINALIZE SOONEST REPORT ON CEILING QUESTION AND COMMENTARY FOR DISTRIBUTION
TO DONORS STOP

REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE *[Signature]*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

MLLejeune:apm

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

File G-7

For Use By Communications Section

Checked for Dispatch: *[Signature]*

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMINGS
CRIST
SECUNDERABAD

COUNTRY: INDIA

TEXT
Cable No.

DATE: JUNE 9, 1975
CLASS OF
SERVICE: ~~Telex No. 012-366~~
Ext. 3592

PLEASE ADVISE DATE OF DISPATCH YOUR COMMENTS ON ALPHA COUNTER RUDDY
REPORT AND BETA DRAFT SECRETARIAT COMMENTARY ON 1976 BUDGET STOP WE
MUST FINALIZE SOONEST REPORT ON GRILING QUESTION AND COMMENTARY FOR DISTRIBUTION
TO DONORS STOP

REGARDS
LEJUNE

NOT TO BE TRANSMITTED

COMMUNICATIONS SECTION

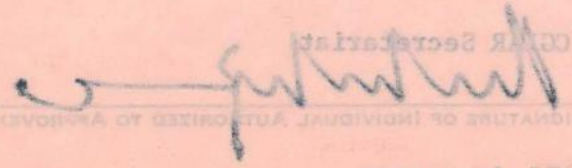
FILED JUN 8 6 27 PM 1975

DISPATCHED

FOR USE BY Communications Section (to be used only)

Checked for Dispatch

REFERENCE: M.L.J.:apm

SIGNATURE: 

DEPT: COMM. SECRETARIAT

NAME: Michael L. Lejeune

AUTHORIZED BY:

ORIGINAL (File Copy)

IMPORTANT: See Secretariat Guide for preparing form.

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

May 30, 1975

Dr. R. W. Cummings
Director, ICRISAT
1-11-256, Begumpet
Hyderabad 500016 A.P.
INDIA

Dear Dr. Cummings:

Thank you for your letter of May 20 enclosing your request to Mr. Hjertonsen for transfer of Sweden's 1975 contribution to ICRISAT.

You might write along the same lines to Belgium and Norway. The appropriate addresses I think would be:

Belgium:

Mr. G. Derkinderen
Administration generale de la Cooperation au
developpement (AGCD)
a l'attention de la Direction de la Cooperation
Multilaterale
Building "A.G."
Place du Champ de Mars 5
B1050 Bruxelles, Belgium

Norway:

Mr. Paal Bog
Director, Planning Department
Norwegian Agency for International Development
Karl Johans Gate 14
Oslo, Norway

We look forward to seeing you during Centers Week.

Sincerely yours,

Michael L. Lejeune
Executive Secretary

DRitchie:ec

~~C-9~~

G-7

UNITED NATIONS
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT

866 UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

TELEPHONE: 754-1234

CABLE ADDRESS: UNDEVPRO • NEW YORK

REFERENCE: GLO/74/005

28 May 1975

Dear Mr. Högel,

I refer to your Voltagram of 15 May 1975 in which you question whether ICRISAT staff qualify for issuance of Laissez-Passers or other official documents.

We have consulted our legal services on this question, and have been advised as follows:

"Under Article VII, Section 24, of the Convention on the Privileges and Immunities of the United Nations and Article VIII, Section 26, of the Convention on the Privileges and Immunities of the Specialized Agencies, only officials of the UN or of the Specialized Agencies, respectively, may be issued UN Laissez-Passer."

Since Mr. Pattanayak does not hold a letter of appointment as a staff member of UN, including UNDP, or a Specialized Agency, and does not otherwise qualify as an official of one of these organizations, he is, in the opinion of the Legal Services, not entitled to a Laissez-Passer.

Sincerely yours,

William T. Mashler
Director

Division for Global and Interregional Projects

Mr. Jens Högel
Resident Representative of the
United Nations Development Programme
in Upper Volta
Boîte postale 575
Ougadougou, Upper Volta

PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT



UNITED NATIONS
DEVELOPMENT PROGRAMME

866 UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

CABLE ADDRESS: UNDEVELOP & NEW YORK

TELEPHONE: 100-1234

28 May 1975

REFERENCE: GDA/74/005

Dear Mr. Hoge,

I refer to your telegram of 15 May 1975 in which you question whether ICRISAT staff qualify for issuance of laissez-passe or other official documents.

We have consulted our legal services on this question, and have been advised as follows:

"Under Article VII, Section 2c, of the Convention on the Privileges and Immunities of the United Nations and Article VIII, Section 2c, of the Convention on the Privileges and Immunities of the Specialized Agencies, only officials of the UN or of the Specialized Agencies, respectively, may be issued UN laissez-passe."

Since Mr. Pattanayak does not hold a letter of appointment as a staff member of UN, including UNDP, or a Specialized Agency, and does not otherwise qualify as an official of one of these organizations, he is, in the opinion of the legal services, not entitled to a laissez-passe.

Sincerely yours,

William T. Mahler
Director

Division for Global and International Projects

Mr. Jean Hoge
Resident Representative of the
United Nations Development Programme
in Upper Volta
Boite postale 575
Ouagadougou, Upper Volta

RECEIVED
1975 JUN -3 PM 3:30



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

file
✓ 67

Phones : City Offices : 72091, 72628
Laboratory : 36029
Farm : 39676
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-366

May 20, 1975

CITY OFFICE :
1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

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

Dear Mr. Lejeune :

Following up on our discussions in Washington, I am enclosing a copy of a letter I have sent to Mr. Ulf Hjertonsen, Sweden, concerning the Swedish contribution to ICRISAT for 1975.

I would appreciate your advice with reference to steps we should take and to whom we should address correspondence concerning the Belgian contribution (\$25,000, I believe) and the Norwegian contribution (indicated at \$730,000 in the letter from Mr. Harold Graves dated November 21, 1974).

With best regards, I am,

Sincerely yours,

Ralph W. Cummings
Ralph W. Cummings
Director

Mr Ritchie
convey a
please draft
a note to
Cummings with
the info. In the
case of Norway, I
think it would
be Paul Singh
of Andhra Pradesh.
ay

Encl : a/s

RECEIVED
21 MAY 1975
1:23



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 75081, 75828
Laboratory : 38029
Farm : 38878
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 018-388

MAY 30, 1975

CITY OFFICE :
1-11-288, Begumpet,
Hyderabad-500018, A.P., India.

Mr. Michael Lejune
Executive Secretary
Consultative Group on International
Agricultural Research
1818 H Street, N.W.
Washington, D.C. 20432

Dear Mr. Lejune :

Following up on our discussions in Washington, I am
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Sweden, concerning the Swedish contribution to ICRISAT for
1975.

I would appreciate your advice with reference to steps
we should take and to whom we should address correspondence
concerning the Belgian contribution (\$25,000, I believe) and
the Norwegian contribution (indicated at \$730,000 in the
letter from Mr. Harold Graves dated November 21, 1974).

With best regards, I am,

Sincerely yours,

Ralph W. Cummings
Director

RECEIVED
MAY 28 PM 1:53
MAIL UNIT

Encl : 2/s

Handwritten notes:
The letter
concerns
please draft
a note to
Cummings with
the info. on the
case of Belgium's
contribution
of \$25,000.
of \$730,000.



Record Removal Notice

The World Bank Group
Archives
& Records Management

File Title CGIAR - G-7 - International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) - Correspondence 75/77-01		Barcode No. 1760851		
Document Date 20 May, 1975	Document Type Letter			
Correspondents / Participants To: Ulf Hjertonsen From: Ralph W. Cummings				
Subject / Title Support for 1975 to International Crops Research Institute				
Exception(s) Financial Information iv				
Additional Comments		<p>The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.</p> <table border="1"><tr><td>Withdrawn by Sherrine M. Thompson</td><td>Date March 26, 2021</td></tr></table>	Withdrawn by Sherrine M. Thompson	Date March 26, 2021
Withdrawn by Sherrine M. Thompson	Date March 26, 2021			

G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

CONDITIONS OF SERVICE FOR DAILY-RATED WORKERS

May 15, 1975

Hyderabad - India

ICRISAT - HYDERABAD

CONDITIONS OF SERVICE FOR DAILY-RATED WORKERS

INTRODUCTION

The Institute (ICRISAT) is designed to serve as (a) a world centre for the improvement of sorghum, millet, pigeon peas, chickpeas, and groundnuts, (b) a centre to promote the development and demonstration of improved cropping patterns and systems of farming which optimize the use of human and natural resources in the low rainfall, unirrigated, seasonally dry, and semi-arid tropics, and (c) a centre which may undertake such other programs or extensions of its programs as its Governing Board may determine. In carrying forward its programs the Institute develops close linkages and cooperation with regional and national research and action programs for these same crops and farming systems in similar ecological and cropping areas in various parts of the world.

The Institute is recognized in India as an autonomous, international, philanthropic, non-profit, research, educational and training organization. It is a research and educational organization under international auspices and it is not a trading or industrial organization. Under the provisions of United Nations (Privileges and Immunities) Act, 1947 (Act 46 of 1947), the Government have granted the Institute immunity from every form of legal processes against the Institution. As such, no action can be taken against it under the laws of India including the industrial laws and statutes. Whatever grievances the employees may have should be ventilated strictly within the provisions of these policies and not through any outside agent, agency or organization.

Its Governing Body is the supreme authority under which the Institute operates. The Board is responsible for the development and/or approval of the Institute's programs and for the policies under which the Institute operates. It is responsible for the selection and employment of the Director and authorises the appointment of the senior staff members on recommendation of the Director.

In the proposal for the establishment of the Institute and the agreement with the Government of India, it was indicated that supporting scientific staff, technicians, and clerical, administrative, and operative and support personnel of the Institute would be drawn largely from the host country and would be employed under terms and conditions established or approved by the Governing Board. It was anticipated that the conditions of employment of such personnel would approximate to the norms of the host country with such modifications as may be necessary to assure a well qualified staff, high quality of performance, and within this framework, the Board wishes to give reasonable and just consideration to the welfare of the employees.

It is the desire of the Institute to establish conditions of employment which are clearly fair to the interests of those concerned, both employee and the employer, and which encourage the employees to take a sincere interest in the progress of the program and put their best talents forward in the discharge of their responsibilities. The following statement is prepared with this in mind. The conditions and practices of employment will be reviewed periodically and such changes will be made as experience indicates.

ICRISAT requires the service of a substantial number of unskilled and semi-skilled workers for its farm, or experimental station, physical plant and other connected operations. While this is a necessary and very important group, the number of persons required by the Institute is highly variable from time to time in view of the particular nature of its operations. ICRISAT believes that a contented and capable work force is a real asset in achieving its objectives. The ICRISAT management wishes to establish and maintain employment procedures and working conditions which are fair and reasonable and compatible with the norms of the community.

EMPLOYMENT

Basis of employment

The daily-rated workers will be employed in the following two categories:

1. Regular Work Force (continuous basis)
2. Contract Work Force (non-continuous basis)

1. REGULAR WORK FORCE (CONTINUOUS BASIS)

A small number of workers in each group whose performance record has been consistently of superior quality and dependability will be identified and will be given the opportunities for full time employment and will constitute a regular work force. This group will be small and can accommodate only a small portion of the workers whose work is found satisfactory. A worker in this group will not be paid for any regular work days on which he fails to report for duty unless excused under other provisions of this statement. If at any time the total requirements of the Institute are such that even this group cannot be fully employed, members of the regular work force who may have to be laid off temporarily will be given preference when additional workers are later required.

Promotions

Workers in the regular work force who have demonstrated particular aptitudes and performance may be promoted to a semi-skilled category, carrying a slightly higher level of wages.

Workers with special skills or who demonstrate the ability for limited supervisory responsibility may be eligible for a still higher level of wages, depending on the nature of their work and responsibilities. The Institute will lay down procedures for making these promotions or appointments. As indicated elsewhere in this statement, the performance of all workers will be evaluated regularly and this evaluation will be utilized in determining a person's eligibility for promotion.

Hours of work

The Institute has different sets of hours of work for different workers depending upon their classification and duties. Generally, a work day represents eight hours of actual work, in addition to the time allowed for lunch or rest breaks. This will usually require a total time of around nine hours, including the mid-day lunch and rest break. A work week will normally consist of six days. In case a daily rated worker is required to work on a seven day week at any time, he will be compensated for the extra day's work at the same rate as for each of the other work days.

Overtime

It is the policy of the Institute not to pay overtime wages. However, workers who are required to work beyond the designated working hours on any given day may be given up to the equivalent amount of time off on another day within the following two weeks period. This time off credit will not be accumulated and will not constitute credit for either extra pay or extra time off at a later time.

Sick leave

Sick leave is to be taken only in case of bonafide sickness. A maximum of 6 days sick leave with pay per year will be allowed.

Termination

Continued employment of members of the regular work force is dependent on continuing need for the services for which a person is employed or qualified, availability of sufficient funds, continued satisfactory health, regular and faithful attention to duty and maintenance of high standards of personal conduct, honesty and integrity. If employment is terminated by ICRISAT for any of the above or other sufficient reasons, a member of regular work force will be given two weeks' notice in advance of the date of termination or wages in lieu of notice for all or a portion of this two week notice period.

Separation pay or gratuity

Members of the regular work force who have completed five or more years of service with the Institute will be entitled to a separation pay of one half month's wages for each year of service.

Odd months beyond the number of whole years completed will be counted on a pro-rata basis, where applicable.

The rate of separation pay will be calculated using the average base wage drawn during the last thirty-six months prior to separation.

This compensation will be paid regardless of whether members of regular work force resign, retire, or their services are terminated by the Institute.

2. CONTRACT WORK FORCE (NON CONTINUOUS BASIS)

From time to time the Institute will engage additional workers on contract basis when special tasks or peak demands require it. Contract workers will be paid the normal schedule of wages only for the work period covered by his contract. He will not be paid for any work days during this period on which he fails to work. The length of the contract period may vary from one day to several months depending on the nature of the work. If rain prevents work on any day during the contract period, but the worker reports for duty, he will be paid wages for that day. The rate of pay for contract workers will vary depending on the skills involved and will be established at the beginning of the contract period. The contract may be renewed if the performance of the worker is satisfactory, but only if there is sufficient work to necessitate his services. In view of the number of persons desiring work and who are competent for doing the work required by the Institute, it may be necessary to work out a rotation system during periods of the year when the work requirement is relatively low, so as to give opportunities for other qualified persons. Failure to renew a contract upon its expiration does not necessarily signify unsatisfactory performance but, in many instances, may be necessary because of insufficient work to provide employment for all concerned persons. The hours of work for contract workers will be the same as for the regular work force unless it is otherwise stated in the contract.

3. WORKING CONDITIONS FOR REGULAR AND CONTRACT WORK FORCE

Identity cards

A system of identity cards or tokens for the daily rated workers will be utilized for establishing eligibility of a given worker to report for work on any given day.

Drinking water

ICRISAT will provide potable drinking water within a reasonable distance from any location where daily rated workers are working.

Transportation

Daily rated workers of ICRISAT are expected to make their own arrangements for getting to their designated places of work. In the absence of special circumstances and arrangements, the Institute will not take responsibility to provide transportation to and from work for this group of workers.

Holidays

Persons employed full time either on the regular work force or as contract employees will be given the holidays observed by the Institute which fall during the period of their regular employment or employment contract. Such holidays will be given with full pay. Sundays are not normal work days and are not treated as holidays under this provision.

Insurance and medical attention

All daily rated workers will be insured against accidents while at work. All injuries, whether trivial or otherwise, which are received while at work should be reported immediately by the injured worker to the immediate Supervisor or Foreman who will complete the necessary accident reports and will arrange for medical attention if needed. Delay in reporting may result in loss of compensation. Medical attention will also be arranged for workers who become ill while at work. In case of accidental death occurring while on duty and/or as a direct result of an accident occurring in the carrying out of work to which an employee is assigned by the Institute, the employee's family will be compensated to the extent of two years wages or Rs.5,000/- whichever is greater. In case of permanent injury while on duty not resulting in death, such as loss of eye sight, dismemberment, etc. a reduced schedule of payments will be provided. This does not apply to organic failures such as heart attacks, etc. which may not be actual work accidents. There is no insurance or other coverage for sickness or for accidents occurring when the employee is not at work.

Uniforms or Protective clothing

Uniforms will not normally be provided. Protective clothing may be provided in cases where the nature of work requires such a supply.

Payment period

Wages due to a worker for a given month will normally be paid at the end of the month, or at the termination of his contract.

Evaluation of performance

Supervisors are expected to continually evaluate the performance of each daily rated worker. Those whose work is found satisfactory and dependable will be given preference in employment when work is available while unsatisfactory workers or those exhibiting bad conduct will be eliminated from the lists of those eligible for employment. Evaluation will be made on the following basis.

1. Punctuality
2. Dependability
3. Quantity and quality of work performed
4. General skills
5. Level of education
6. Conduct

Each worker on the regular work force will be evaluated annually. Contract workers will be evaluated on the above basis at the time of termination of their contracts.

Grievance Procedure

The ICRISAT will be divided into the following activities or departments.

1. Administration
2. Farm Services
3. Crop Improvement
4. Farming Systems
5. Physical Plant

Each Activity/department will have its own Head of activity.

Any grievance which a daily rated worker has, may be brought to the notice of the Head of the Activity in writing.

If the daily rated worker is not satisfied with the reply received from the head of Activity, or, if no reply is received within a period of seven days of submission of the grievances, an appeal shall lie to the Director.

For grievances of general nature (other than individual grievances), the daily-rated workers in each Activity/Department may choose

from amongst them a representative to represent their grievances. The general grievances in respect of each Department may be represented to the Administrator through its chosen representative. If the grievances pertain to ICRISAT daily-rated workers as a whole such grievances may be represented to the Administrator jointly by all the chosen representatives.

If the representative/representatives are not satisfied with the reply received from the Administrator, or, if no reply is received within a period of seven days of submission of the grievance, an appeal shall lie to the Director.

The decision of the Director in respect of individual or general grievances shall be final.

Rates of wages

The Institute will review the wage scale for daily-rated workers once a year and will establish a wage scale which appears reasonable and compatible with the norms for wages paid in other institutions in the area which are engaged in agricultural research and related activities.



Central File
G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

29 April 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Messrs Paramount Electrical Supply Co.,
19, Beekman Street,
New York, N.Y. 10038,
U. S. A.

Subject : Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs :

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organisations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and full assistance is being given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, tax-exempt, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the World, including three representing the Government of India.

Under the ICRISAT's agreement with the Government of India, no import licences are required nor does ICRISAT pay import duties. Some airconditioning equipment for our project is being ordered through Blue Star Limited, Bombay on ICRISAT's behalf for import into India by ICRISAT. ICRISAT has agreed to pay the complete c.i.f. cost of such equipment and materials in U.S. Dollars upon presentation of the required documents. Normally, ICRISAT pays all suppliers thru out the world against invoices and shipping documents. We hope that we can also handle the payment of the air conditioning materials or equipment being supplied by you in the same manner. We want to avoid issuance of letters of credit as such, as they will cause us some inconvenience and delays on this end and would increase our total costs.

If you would like to confirm ICRISAT's credit position, we would invite you to contact Mr. Michael LeJeune, Executive Secretary, Consultative Group on International Agricultural Research (CGIAR), World Bank, 1818 H.St. NW, Washington DC 20433, USA., Telephone (202) 477-3592, or Mrs. Joan R. Murray, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212) 883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

INTERNATIONAL GROPE RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phone: CHY Office: 75001, 75028
Laboratory: 26029
Farm: 26070
Grama: CRISAT, SOUMBERABAD
Telex: ICRISAT 019 388

29 April 1975

CITY OFFICE:
1-11-268, Begumpet
Hyderabad-500016, A.P., India

Messrs Paramount Electrical Supply Co.,
19, Beekman Street,
New York, N.Y. 10038,
U. S. A.

Subject: Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs:

The International Grope Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or international organizations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and staff assistance is being given by both the Central and State Governments in its establishment and operation.

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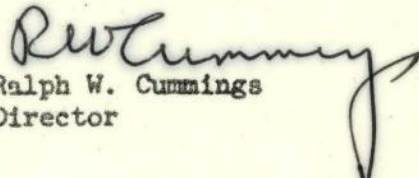
MAILING UNIT
APR 29 1975

Page # 2

We would like to take this opportunity to remind you that all invoices should be made out in the name of the Director, ICRISAT, 1-11-256, Begumpet, Hyderabad : 500 016, A.P., India. Contrary to what Blue Star may have indicated to you along with their order to you, the Blue Star Order Number should not appear on any package nor should the name BLUE STAR appear on any invoices or on any shipping documents. It is imperative that these instructions be followed very strictly as we want to avoid any difficulties with Indian Customs and other Government formalities.

In closing, we would request that you allow us to pay you according to our normal procedures in order to avoid the additional cost and inconvenience of letters of credit. If you do have any questions, please feel free to contact us directly.

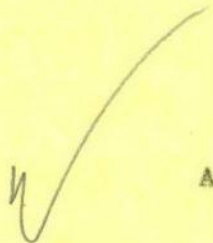
Sincerely


Ralph W. Cummings
Director

cc: ✓ Mr. Michael LeJeune World Bank, Washington DC.
Mrs. Joan R. Murray, IIE., New York
Vaatu Shilpa/J.A. Stein & Associates
Blue Star Limited, Secunderabad/New Delhi/Bombay
RV/OPS/KPN/ADL

ADL:ss

SPECIAL DELIVERY



April 29, 1975

Dear Dr. Cummings:

Thank you very much for your cable saying you will be coming to see us in the afternoon of May 6. We look forward to seeing you. As you requested, I enclose a copy of the Ruddy/Coulter report and of a letter I have sent to you in Hyderabad.

See you soon.

Sincerely,

(signed) Michael L. Lejeune

Michael L. Lejeune

Enclosures

Dr. Ralph W. Cummings
Abbey Victoria Hotel
151 West 51st Street
New York
New York

MLLejeune:apm

April 29, 1975

Dr. Ralph W. Cummings
Director
International Crops Research Institute
for the Semi-Arid Tropics
1-11-256, Begumpet
Hyderabad 500016, A.P.
India

Dear Dr. Cummings:

On January 21, you wrote to Mr. Baum and me about ICRISAT's financial needs over the period 1974 through 1977 in the light of events since an expenditure ceiling of \$33 million was established last April in discussion with the Donors. You asked that the ceiling be relaxed and you requested our assistance in obtaining the necessary additional funds. You also referred to the possible shortfall in funding during the construction period, and expressed the hope that arrangements could be made for bridging finance.

Dr. Coulter and Mr. Ruddy, of the CG Secretariat, visited ICRISAT to discuss with you and others the data and issues involved. They have completed their analysis of the position and have made recommendations to me. Based on their draft report, the Secretariat will recommend to ICRISAT's donors what degree of relaxation it would be appropriate for them to sanction. Before making this recommendation, however, we would wish you to know how it was arrived at, and would welcome your views on the analysis and the substance of the issues involved. The easiest and best way to proceed is for you to have the opportunity to study the Coulter/Ruddy draft report and to give me your comments on it before we make our recommendations to the Donors. Accordingly, I am enclosing a copy of their draft report dated April 28, 1975, and have, meanwhile, sent you a cable summarizing its conclusions. (A copy of the cable is attached.)

You will wish, I am sure, to get a definitive answer from the Donors as soon as possible, to enable you to get ahead with detailed planning through the rest of the period to the end of 1977. I would appreciate knowing from you the date by which you must have this answer. If it can wait until the end of July, I would propose convening the interested Donors at the time of Centers Week, but if you need the answer before then, we can arrange to circulate our recommendations to the Donors and

Dr. Ralph W. Cummings

- 2 -

April 29, 1975

get their approval by mail. Either way, in advance of asking them to act, we propose to give the Donors a memorandum, based on the enclosed draft report, setting out the Secretariat's recommendations. I would hope to be able to say that you concur in the recommendations. We would also undertake to help you to the fullest extent possible in obtaining the funds necessary to cover the level of expenditure recommended.

The question of "bridging finance" has been a difficult one all along. I am glad you feel it will not arise in 1975, and I hope it will not arise later. It ought to be possible to find ways to cover shortfalls of the size indicated in Table 6 of the enclosed draft report from contributions of Donors and for ICRISAT to avoid going into debt.

You mentioned the possibility that you would be in Washington in the first week in May, and that we could get together to discuss the various questions. By the time this letter gets to Hyderabad we may have moved forward. When you and your colleagues, however, have had time to digest the enclosed draft report, I should be glad to have your comments so that we may get on with making recommendations to the Donors.

Thank you for giving John Coulter and Mike Ruddy so much of your time when they were at ICRISAT. The cooperation they received has helped us greatly in our understanding of the problems you face.

Yours sincerely,

(signed) Michael L. Lejeune

Michael L. Lejeune

Enclosures

MLLejeune:apm

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EXECUTIVE SECRETARY, ~~INTER-AMERICAN~~

→ ICRISAT will
advise directly

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

GRATEFUL YOUR ADVISE AS TO DISBURSEMENT OUR 1975 CONTRIBUTION

FOR ICRISAT. REGARDS ULF HJERTONSSON, FOREIGN MINISTRY, STOCKHOLM.

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April 28, 1975

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WASHINGTON DC USA

ATTENTION LEJEUNE GRATEFUL URCAS APRIL TWENTYFIVE REQUEST YOU
MAIL COPY RUDDY COULTER REPORT BY ATTENTION ABBEY, VICTORIA HOTEL 151
WEST FIFTYFIRST STREET NEWYORK FOR ARRIVAL MAY THREE STOP WILL PLAN
VISIT YOUR OFFICE WASHINGTON AFTERNOON MAY SIX REGARDS

CUNNINGSS CRISAT SECUNDERAAD

April 28, 1975

TO: Mr. Michael L. Lejeune
FROM: M. E. Ruddy and J. Coulter
SUBJECT: ICRISAT - Revision of 1974-1977 Operating and Capital Budget

1. As you know, Dr. Cummings has asked for a \$3.5 million increase in ICRISAT's 1974-1977 capital budget and an additional 1.1 million for operating costs over the period 1974-1977 (for a new ceiling of \$37.6 million), and the assistance of the Consultative Group Secretariat in raising the additional funds. He has also asked for reassurance that IDA standby financing will be available to ICRISAT should bridging funds become necessary.

2. ICRISAT's financial requirements for the period 1974-77, as now foreseen, are summarized in the table below and compared with the budget of \$33 million, agreed at the meeting of ICRISAT donors in April 1974.

Table I
ICRISAT OPERATING AND CAPITAL BUDGET ^{a/}
(\$ millions)

	through <u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>	<u>Total</u> <u>74-77</u>	Financial Plan of April <u>1974</u>
Budget of April 1974								
Operating	3.6	2.7	3.7	4.5	4.8	19.3	15.7	15.7
Capital	1.8	3.2	6.4	3.8	2.1	17.3	15.5	17.3
Total	<u>5.4</u>	<u>5.9</u>	<u>10.1</u>	<u>8.3</u>	<u>6.9</u>	<u>36.6</u>	<u>31.2</u>	<u>33.0</u>
Increase Requested (Jan 1975)								3.5
Draft Operating Budget (Apr.1,1975)								<u>1.1</u>
								<u>37.6</u>
Estimate of March 1975								
Operating	3.6	2.8	3.7	4.9	5.4	20.4	16.8	16.8
Capital	1.8	1.4	6.5	8.8	3.0	21.5	19.7	21.5
Total	<u>5.4</u>	<u>4.2</u>	<u>10.2</u>	<u>13.7</u>	<u>8.4</u>	<u>41.9</u>	<u>36.5</u>	<u>38.3</u>

a/ The figures in the table exclude the Groundnut program which, for purposes of keeping current estimates comparable with the base figures, is treated separately. The estimate of total cost is based in ICRISAT figures and our discussion with Dr. Cummings; the distribution of costs over the period 1975 to 1977 is our estimate.

3. You will note from the table that there is an apparent inconsistency of \$700,000 between Dr. Cummings' request for a \$4.6 million increase in the 1974-77 ceiling and in the current estimate of total cost over the same period. The difference is accounted for by the fact that we have priced out the current cost of the original installation ^{a/}, whereas Dr. Cummings' memorandum contemplates some deferral of construction, (It is not totally clear from his memorandum, or from our discussions, which specific items of housing and equipment he considered deferrable) and did not take fully into account the revised cost estimates for furniture and equipment (see paragraph 16 below).

4. The balance of this memorandum is in two sections. The first explains the \$5.3 million increase in the original operating and capital budget (\$33 million vs \$38.3 million) and makes recommendations for reducing or deferring costs. The second analyzes the relationship between required and available funds.

ICRISAT Current vs Original 1974-77 Operating and Capital Budget

5. The table below compares the total operating and capital budgets, agreed at the time the ICRISAT's donors met in April 1974, with the estimate prepared by ICRISAT for the same program at the time of the Secretariat mission in March 1975. The table also shows a budget we are prepared to recommend if additional funds can be identified. Comments on the cost increases in major components of the program and on our recommended budget follow the table.

a/ See Annex A for the definition of the original program.

Table 2
ICRISAT 1974-1977 Total Operating and Capital Budget (\$ Millions)

	<u>ICRISAT Detail Budget</u>	<u>Ceiling Set by Donors</u>	<u>Current Estimate</u>	<u>C. G. Mission Recommendation</u>
Operating Costs	15.7	15.7	16.8	16.2
Capital Costs				
Site Development	.5		1.2	.9
Campus External Work	2.3		2.2	2.2
Building Construction	8.1		10.7	9.2
Equipment & Furniture	3.7		5.1	4.1
Architect Fees & Consultants	1.1		1.1	1.1
Contingency	1.0		1.3	1.3
Total Capital	<u>16.4</u>	<u>17.3</u>	<u>21.5</u>	<u>18.8</u>
Total Core Program	<u>32.1</u>	<u>33.0</u>	<u>38.3</u>	<u>35.0</u>

Operating Costs

6. At the time of our mission, ICRISAT had not made significant progress toward the preparation of its 1976 program and budget submission to the Consultative Group. However, Dr. Cummings told us he intended to hold ICRISAT's recurring program cost through 1977 close to the \$15.7 million ceiling agreed in April 1974. He recognizes that, because inflation will in fact be higher than anticipated over this period, the ceiling will result in a slower real rate of program implementation than envisioned in April 1974. In our view, the slower rate of development is realistic, and in line with the slower than expected construction of the physical plant. Whether the \$15.7 million ceiling will bring the "right" balance between the development of facilities and recruitment of staff had not at the time of our visit been fully thought through by ICRISAT. In our discussions with Dr. Cummings, we indicated that we would be prepared to support a relaxation of this ceiling, if, based on a careful review of the program, he felt the current ceiling was unrealistically restrictive. We have now received ICRISAT's draft

1976 budget, which proposes that the provision for core operations be increased by 1.1 million over the previously agreed ceiling of 15.7 million. Based on our initial review of ICRISAT's draft 1976 budget, which calls for a 41% increase in junior technicians and other support staff, we have difficulty supporting the rate of growth proposed and question whether ICRISAT can efficiently recruit, train and deploy some 190 additional staff years of input for 1976. When we suggested that we would be prepared to support some relaxation of the operating budget ceiling, we had in mind a figure of around $\frac{1}{2}$ million. Accordingly, we have used in our recommended budget a notional figure of 16.2 million in projecting operating requirements over the period 1974-1977.

Capital Costs

7. As Table 2 above shows, the capital plan of April 1974, which was expected to cost \$17.350 million, is now expected to cost \$21.500 million. A detail comparison of the two plans is given in Annex A to this memorandum.

8. The \$4.2 million increase in costs is mostly accounted for by overruns on the site development, construction and furniture and equipment components of the capital plan. The current estimates for site development and construction represent reasonably firm figures; the furniture and equipment estimate is less firm.

Site Development (plus \$700,000, 44%)

9. The substantial increase in site development costs reflects a significant change in the concept of what in fact is to be developed. The original plan included, by comparison with the current plan, a modest complement of roads, sewers, lagoons, drainage, irrigation work and land shaping. The current plan is much more ambitious.

10. In the summer of 1974, ICRISAT, with the assistance of USAID, acquired extensive US Army surplus earth-moving equipment. The acquisition included 12 bulldozer assorted heavy trucks, graders, rollers, backhoes and spare parts. In view of its equipment holdings, ICRISAT substantially expanded its development concept to include reservoirs, tank reclamation work and extensive land shaping for gravity flow irrigation

11. In our opinion, the site development plan is for all practical purposes past the point of no return and little can be done to reduce projected costs. In the long run the expanded site development concept will probably prove to be an effective use of funds, but it has nevertheless added substantially to the cost of the installation. We have included a \$900,000 provision for this work in our recommended budget. The provision anticipates income of \$300,000 (probably in late 1976) from the sale of earth-moving equipment once the ICRISAT site is fully developed.

Construction (plus \$2.6 million, 32%)

12. From the outset, the Consultative Group Secretariat expressed its concern about the scale and high quality of ICRISAT's building designs and specifications. These concerns were communicated to ICRISAT and to the donors at the time donors met in April 1974, and again to ICRISAT in May of that year, in the form of specific recommendations made by IBRD architects who had reviewed the plans. ICRISAT did make most of the changes recommended by the bank's architects, but they did not send the plans back to their own architects for structural re-design (as recommend) on the grounds that this would have severely delayed the implementation of ICRISAT's programs. Based on the records we reviewed, the buildings would have cost about 8 to 10% above current estimate had the specification changes recommended by the Bank not been made.

13. The construction bids, which are for the most part the basis for current cost estimates, confirm in our opinion that the installation is over designed. (See unit cost of construction figures in Annex B attached).

14. In agreement with the Consultative Group Secretariat, in February 1975, construction contracts totalling \$6.6 million were awarded against a priority listing totalling \$7.6 million and a total construction plan of \$10.7 million (\$10.9 million if additional items not in the original plan are taken into account).

Table 3 below lists major components of the construction program and shows the status of the program in terms of items under contract, in the priority list but not yet under bid, and "deferred". The table also shows our recommended budget.

Table 3
ICRISAT Total Cost of Construction
(\$ 000)

	Total Estimated Cost March 75	Under Contract	Bids Not Received	"Deferred"	C. G. Recommended Total
Library & Administration	1150	1150			1150
Laboratories & Lab					
Branches (3)	2785	2085		700	2785
Farm Services Facilities	805	805			805
Dining Center	459	459			459
Plant Growth Facilities	508	508			508
Warehouse	143	143			143
Canteen	173	173			173
Laundry	37			33	37
Gas Storage	9	9			
Gatehouse	13	13			13
Dormitories	1697	848		849	1697
Flatlets	448	448			448
Staff Housing	1967		940	1027	1000
Guest House	271			271	-0-
Other Support Staff					
Housing	210			210	-0-
Other	<u>10675</u>	<u>6641</u>	<u>940</u>	<u>3102</u>	<u>9227</u>
Additional Items not included in the approved Financial Plan					
Telephone Building	86				
Lab	33				
Training Center	<u>129</u>				
	<u>248</u>				
Total	<u>10923</u>				

15. As the table shows, we are recommending a substantial reduction in the housing provision. This recommendation follows from the fact that we were not particularly impressed with the arguments advanced in support of the \$2.1 million budget for staff housing (20 units for international staff and 44 units for essential support staff); and is based on (a) our opinion that adequate rentals are available in Hyderabad at reasonable rates; and (b) our conclusion that deferral of this element of the capital plan would in no way damage ICRISAT's rate of program development. Our recommended budget of \$1 million allows on site housing for a very limited number of essential staff through 1977, and contemplates that the question of staff housing be reviewed again in late 1976 or early 1977.

Furniture & Equipment (plus \$1.1 million, 38%)

16. At the time of our visit, we reviewed with ICRISAT the furniture and equipment budget and in the context of that review some further upward adjustments were made, mostly on the grounds of recent price changes in major items. Based on this review, furniture and equipment is now projected to cost about \$5.1 million compared to an original budget of \$3.7 million. About \$1.8 million of this total has been disbursed (mostly for vehicles, farm equipment, and office furnishings), and an additional \$230,000 is now under purchase order. The balance, which totals just over \$3 million, is not a carefully thought out budget. The major components of the budget are shown in Table 4 below.

Table 4
ICRISAT-Total Cost of Furniture & Equipment
 (\$ 000)

	<u>Estimate of</u> <u>March 1975</u>	<u>Purchased</u> <u>To Date</u>	<u>Now</u> <u>On Order</u>	<u>Estimated</u>	<u>C. G.</u> <u>Recommended</u> <u>Budget</u>
Scientific Equipment	1335	41	37	1257	1200
Furniture	635	251	40	343	491
Base Stock	100	-	-	100	100
Tractor & Field Equipment	810	694	16	100	800
Vehicles	1100	480	101	519	800
Tools & Shop Equipment	195	121	3	71	195
Computer	170	-	-	170	25
Office Equipment	165	81	12	72	150
Audio Visual	65	49	4	12	65
Elect. & Grounds Equip.	70	9	1	60	50
Kitchen Equipment	333	42	-	291	150
Laundry	27	-	-	27	27
Books & Publication	58	32	6	20	58
Total	<u>5063</u>	<u>1800</u>	<u>220</u>	<u>3043</u>	<u>4111</u>

17. As our recommended budget indicates, we believe there is room for economy in this budget and have suggested line item ceilings which bring the total down by about \$1 million. While some of the reductions are admittedly as arbitrary as the estimates (e.g. scientific equipment and vehicles) others are not. For example:

(a) the reduction in furniture is roughly in line with our recommendations on staff housing; (b) the \$300,000 reduction in the vehicle budget may be a little steep, but the proposed budget of \$1.1 million strikes us as excessive in the extreme. (assuming \$4,500 per vehicle this budget would provide 245 vehicles); (c) the recommended budget for computing equipment is out of line with our understanding of the PS Ross Report which suggests a figure of \$18,000 for ICRISAT; and (d) the \$333,000 estimate for kitchen equipment seems grossly out of line.

We suggest that something other than stainless steel equipment be used in the kitchen, even at the risk of reducing sanitary standards.

18. In proposing these reductions in the furniture equipment budget, we have left the contingency provision of \$1.3 million intact with the thought that it could provide some relief in the equipment budget if our recommended budget proves too stringent.

Summary

19. For the reasons given above, we are recommending a revised operating and capital budget for the period 1974-77 of \$35.0 million, (\$16.2 million for operating and \$18.8 million capital). This compares with Dr. Cummings' request for a new ceiling of \$37.6 million and a revised estimate for the original plan of \$38.3 million, and requirements of \$38.5 million if additional construction is taken into account.

Funds Required and Available - 1974-1977

20. It is difficult to project annual disbursements for this financial plan, with any high degree of accuracy. There are still many unknowns in the capital plan, and even more uncertainty when it comes to estimating the timing of particular disbursements. However, at the time of our visit, we did work out with ICRISAT's staff projections of cash flow requirements on some \$17 million worth of items in the capital plan (the figure excludes items of "deferred" construction, the contingency provision and a small element of furniture and equipment associated with deferred construction). The pattern of disbursements worked out in the course of this exercise, is shown in Table 5 below. We have adjusted this pattern judgementally on the grounds that slippage will very likely be higher than anticipated, particularly when applied to the total program, but retained the assumption that all work will be completed by the end of 1977; an assumption we believe is optimistic.

Table 5
% of Total Disbursement by Year

	through <u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
March 1975 Projection	9.6	8.5	33.4	41.0	9.4
Adj. for slippage	-	-	-2.0	-7.0	+7.0
Adj. Projection	<u>9.6</u>	<u>8.5</u>	<u>31.4</u>	<u>34.0</u>	<u>16.4</u>

21. By applying these adjusted disbursement rates to the \$18.8 million capital budget we recommend, we have estimated annual disbursements for capital items through 1977. To this projection of capital requirements, we have added our estimate of annual core program expenditures, and expected requirements for the Groundnut program, to arrive at total requirements, (shown in section A of Table 6 below). These requirements are compared with our understanding of "available funds", as shown in section B of Table 6, in order to estimate the gap between available and required funds.

Table 6
Estimated Funds Required & Available 1974-77
(C.G. Recommended Budget of \$35 Million)
(\$Million)

	through 1973	1974	1975	1976	1977	Total Capital & 74 - 77 Operation
A) <u>Operating & Capital Requirements</u>						
Operating	3.6	2.8	3.8	4.6	5.0	16.2
Capital	1.8	1.6	5.9	6.4	3.1	18.8
Sub Total	5.4	4.4	9.7	11.0	8.1	35.0
Groundnut Program			.3	.6	.5	1.4
Total Requirements	<u>5.4</u>	<u>4.4</u>	<u>10.3</u>	<u>11.6</u>	<u>8.6</u>	<u>36.4</u>
B) <u>Funds Available:</u>	a/					
Carry Over From Previous Year		1.3	3.2	1.3	(.7)	.6
Funds Pledged or Anticipated b/		6.1	8.0	8.4	8.1	31.2
Earned Income c/		1.0	.4	.4	.3	2.1
Groundnut Program			.3	.6	.5	1.4
Possible Additional Grants:						
. UK			.7			.7
. Kresge				.4		.4
. Other (Australia ?)				.5		.5
Total Funds Foreseen		<u>8.4</u>	<u>12.6</u>	<u>11.6</u>	<u>8.2</u>	<u>36.3</u>
<u>Funds Required</u>						
Projected Disbursements		4.4	10.3	11.6	8.6	36.4
Working Capital		.8	1.0	.7	.5	.7
Total Required		<u>5.2</u>	<u>11.3</u>	<u>12.3</u>	<u>9.1</u>	<u>37.1</u>
Funds Carried Over (Short Fall) to next year		<u>3.2</u>	<u>1.3</u>	<u>(.7)</u>	<u>(.9)</u>	<u>(.9)</u>

FOOTNOTES GIVEN AT END OF MEMO

22. Based on the assumptions given (i.e. an operating and capital budget of \$35 million, the disbursement pattern assumed in Table 5, the addition of funds for the Groundnut program and the new grants from the UK, Australia and Kresge) we estimate that ICRISAT will have adequate funding through 1976, but will need additional funds of about \$700,000 in 1976 and about 1 million in 1977. To the extent that actual construction lags beyond 1977, these projections overstate funding requirements.

23. We suggest that if agreement can be reached with ICRISAT on the financial plan we recommend we put a strong case for additional funding to ICRISAT donors at 1975 Centers Week. If agreement cannot be reached with ICRISAT we believe we should inform Dr. Cummings that we would not be prepared to support his request for a larger budget.

MERuddy/pam

cc: Messrs. Coulter, Graves, Lewis

FOOTNOTES/PAGE 10

- a/ Carryover of 1.3 million into 1974 is unexpended operating and capital grants plus retained income at the end of 1973.
- b/ Figures shown are based on: (i) 1974 - draft audit report; (ii) 1975 - current budget estimates; (iii) 1976 & 1977 - table attached to Mr. Graves July 1, 1974 memorandum to Dr. Cummings.
- c/ Estimated by Secretariat mission on the assumption that short term investments will yield 10%; overhead for off campus special projects will yield 10% and that income for other sources remains proportionate to 1974 experience.

ANNEX A
ESTIMATED COST OF ICRISAT CAPITAL PLAN
APRIL 1974 and MARCH 1975
(\$ 000)

	April 1974	March 1975	Change Amount	%
<u>Site Development</u>				
Temporary Structures	46	100	54	117
Fences	46	46	-	-
Roads Unpaved	37	30	-7	-19
Drainage, Tank Reclamation and Land Shaping	184	655	471	256
Irrigation System & Equipment	107	280	173	161
Relocation of Power Lines	33	25	-8	-24
Land Surveys	17	11	-6	-35
TOTAL	470	1147	677	144
<u>Campus External</u>				
Road Paving	390			
Earth-Movement	156			
Recreation Facilities	120			
Subtotal	766	406	-360	-47
Utilities & Services	1326	1751	425	32
Contingency	179	-	-179	-
TOTAL	2271	2157	-114	-5
<u>Building Construction</u>				
Administration	620	1150	530	85
Laboratory & Group Work Area	2438	2785	347	14
Farm Services & Facilities	558	805	247	44
Plant Growth Facilities	411	508	97	24
Dining Center	283	459	176	62
Canteen	100	173	73	73
Warehouse & Stores	79	143	64	81
Gate House	57	13	-44	-77
Laundry	39	37	-2	-5
Gas Storage	60	9	-51	-85
Housing:				
Dormitories	836	1697	861	103
Flatlets	265	448	183	69
Staff Housing	1699	1967	268	16
Guest House	252	271	19	8
Other Staff Housing	166	210	44	27
TOTAL Original Plan	7863	10675	2812	36
Additions:				
Telephone Building		86	86	-
Lab Entrance		33	33	-
Training Center		129	129	-
Deletions:				
Sprayer Wash Unit	11			
Covered Parking	60			
Recreation Facilities	156			
TOTAL	8090	10923	2833	35

	April 1974	March 1975	Amount	%
<u>Furniture & Equipment</u>				
Scientific Equipment	1192	1335	143	12
Furniture	762	635	-127	-17
Materials Base Stock	100	100	-	-
Tractors & Field Equipment	680	810	130	19
Vehicles	450	1100	650	144
Tools & Printing Equipment	165	260	95	58
Computer Facilities	100	170	70	70
Office Equipment	95	165	70	74
Site Equipment	70	70	-	-
Kitchen Equipment	70	360	290	314
Books & Publication	58	58	-	-
TOTAL	3742	5063	1321	35
<u>Other Items</u>				
Architect Fees	960	1040	80	8
Consultant Fees	65	50	-15	-23
Interior Decorations	20	20	-	-
Landscaping	20	20	-	-
Subtotal	1065	1130	65	6
Contingencies	980	1343	363	37
TOTAL	2045	2488	443	22
 TOTAL Original Program	16618			
Increase approved by Donors	732			
TOTAL	17350	21530	4180	24
 Additional Items of Construction		248		
TOTAL	17350	21778	4428	26

ANNEX B

ICRISAT
UNIT COST OF CONSTRUCTION
April 1974 and March 1975

	Sq. Ft. (000)		Cost per ^{a/} Sq. Ft. \$	
	April 1974	March 1975	April 1974	March 1975
Administration				
General	24.3	23.5	13.58	22.98*
Library	16.5	17.0	8.97	17.53*
Auditorium	7.6	14.2	18.68	21.97*
Total Administration	48.4	54.7	12.81	21.02
Labor				
West I	20.4	25.9	22.74	22.70*
West II	20.4	25.9	22.74	22.43*
West III	20.2	25.9		
Crop Work Area	36.8	36.7	17.21	20.83
Total Laboratories	97.8	114.4	19.52	21.62
Farm Service Facility	82.3	66.4	6.78	12.12*
Plant Growth Facilities	24.0	16.1	17.12	31.5 *
Dining Center	19.8	19.9	16.31	23.18*
Canteen	9.6	9.8	10.41	17.65
Warehouse & Stores	12.8	13.0	6.17	11.00
Catehouse		.8		16.25*
Laundry	2.3	2.3	16.95	16.08
Sub Total	151.6	128.3	10.46	16.73
Housing:				
Dormitories	79.2	76.9	10.55	22.06*
Flatlets	20.0	18.5	13.25	24.22*
Staff Housing: (20 units)				
International Staff Housing	45.0	48.7		
Directors House	4.5	4.5		
Essential Support Staff (32 units)	56.1	56.1		
Other Support Staff	17.6	17.6		
Total Staff Housing	123.2	126.9	13.79	15.50
Guest House	16.3	16.2	15.46	16.73
Total Housing	238.7	238.5	13.48	19.25
TOTAL	536.5	535.9	14.66	19.92

^{a/} Cost per square foot is based on the total estimated cost per item, including an allocated share of common area cost, divided by the sq.ft. per building.

* Indicates pricing is based on tenders.

INCOMING CABLE

G-7

Distribution: Mr. Lejeune

ZCZC 248423 RC082 PDC0386 RML2605 KNY510 BS362/28

1975 APR 28 PM 4:24

URWT CO INBX 044

SECUNDERAAD 44 28 1555

April 28, 1975

INTBAFRAD

WASHINGTON DC USA

ATTENTION LEJEUNE GRATEFUL URCAB APRIL TWENTYFIVE REQUEST YOU
MAIL COPY RUDDY COULTER REPORT MY ATTENTION ABBEY VICTORIA HOTEL 151
WEST FIFTYFIRST STREET NEWYORK FOR ARRIVAL MAY THREE STOP WILL PLAN
VISIT YOUR OFFICE WASHINFTON AFTERNOON MAY SIX REGARDS

CUMMINGS CRISAT SECUNDERABAD

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERBAD

DATE: APRIL 28, 1975

CLASS OF
SERVICE: ~~TELEX: ICRISAT 015-366~~

LT/RCA
Ext-3592

COUNTRY: INDIA

TEXT:

Cable No.: FOR OUR VISIT TO SAUDI ARABIA, THE PURPOSE OF WHICH IS TO GET SAUDI ARABIA
TO JOIN THE CGIAR AS A DONOR MEMBER, WE WOULD APPRECIATE RECEIVING AS SOON
AS POSSIBLE INFORMATION ON ANY RESEARCH OR TRAINING ACTIVITY IN WHICH
ICRISAT IS NOW ENGAGED WHICH IS OF BENEFIT TO SAUDI ARABIA STOP WE DEPART
MAY SEVEN REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE 
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REFERENCE:


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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CHRIST
SECURITY

DATE

APRIL 28, 1975

CLASS OF

SERVICE

TELEX: 012-300

COUNTRY: INDIA

CITY:

TEXT
Cable No.

FOR OUR VISIT TO SAUDI ARABIA, THE PURPOSE OF WHICH IS TO GET SAUDI ARABIA
TO JOIN THE CGIA AS A HONOR MEMBER, WE WOULD APPRECIATE RECEIVING AS SOON
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IGIBAT IS NOW ENGAGED WHICH IS OF BENEFIT TO SAUDI ARABIA STOP WE DEPART

MAY SEVEN REGARDS

TELETYPE

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AUTHORIZED BY:

NAME: Michael J. Rejzner

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OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERBAD

DATE: APRIL 25, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366

Page 1 of 2

COUNTRY: INDIA

TEXT: THANKS URCAB 21 APRIL STOP URLET OF 21 JANUARY TO BAUM AND ME PRIMO REQUESTED
Cable No: AUTHORITY TO PLAN EXPENDITURE DURING PERIOD ¹⁹⁷⁴1975 THROUGH 1977 AT LEVEL ABOVE
33 MILLION DOLLARS AND SECUNDO REFERRED TO QUESTION OF BRIDGING FINANCE STOP
WE SHALL PUT QUESTION OF CEILING TO DONORS WITH OUR RECOMMENDATION FOR THEIR
DECISION PROBABLY AT SPECIAL MEETING DURING CENTERS WEEK STOP WILL CONSULT
WITH YOU IN ADVANCE RESPECTING RECOMMENDATION AND FOR THAT PURPOSE ARE SENDING
YOU COPY OF RUDDY/COULTER REPORT STOP GLAD DISCUSS WITH YOU WASHINGTON MORNING
MAY 5 OR AFTERNOON 6TH IF YOU THINK PROFITABLE IN ADVANCE OF RECEIVING REPORT
STOP BAUM AND EYE DEPART FOR MIDDLE EAST 7th PARAGRAPH BASED ON OUR REVIEW OF
RUDDY/COULTER REPORT AND OUR ASSESSMENT AVAILABLE FUNDS THROUGH 1977 WE CONCLUDE
REVISED CEILING OF 35 MILLION PLUS 1.4 MILLION FOR GROUNDNUTS MAKING TOTAL 36.4
MILLION DOLLARS FOR THE 4 YEARS IS ABOUT AS MUCH AS WE COULD RECOMMEND TO
ICRISAT DONORS AT 1975 CENTERS WEEK STOP WE HAVE HAD TO NOTE (A) FACT THAT SITE
DEVELOPMENT CONCEPT WAS SIGNIFICANTLY CHANGED AND COST INCREASED WITHOUT
CONCOMITANT REDUCTION IN OTHER ELEMENTS OF CAPITAL PLAN (B) HIGH COST OF
CONSTRUCTION CONFIRMS OUR CONCERN OVER QUALITY AND SCALE OF DESIGN STOP
CONSEQUENTLY WE BELIEVE SOME OF OVERRUN SHOULD BE MADE UP BY DEFERRING OR

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

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TO: CUMMINGS
CRISAT
SECUNDERBAD

DATE: APRIL 25, 1975

CLASS OF
SERVICE: TELEX:ICRISAT 015-366

Page 2 of 2

COUNTRY: INDIA

TEXT:
Cable No.:

FOREGOING A SUBSTANTIAL ELEMENT OF STAFF HOUSING AND OR OTHER CONSTRUCTION
ITEMS STOP (C) WE ALSO NOTE FURNITURE AND EQUIPMENT BUDGET LEAVE ROOM FOR
ECONOMY ON KITCHEN EQUIPMENT, VEHICLES, COMPUTERS ETC AND (D) CORE BUDGET
FOR 1976 CALLS FOR LARGE INCREASE IN STAFF WHICH FEEL IS OUT OF PHASE WITH P
OF COMPLETION OF FACILITIES STOP PARAGRAPH FOLLOWING IS TENTATIVE BREAKDOWN
OF EXPENDITURE BY YEARS:

1975 CAPITAL 5.9 CORE OPERATIONS 3.8 GROUNDNUTS 0.3

1976 CAPITAL 6.4 CORE 4.6 GROUNDNETS 0.6

1977 CAPITAL 3.1 CORE 5.0 GROUNDNUTS 0.5

PARAGRAPH DRAFT REPORT BEING MAILED FOR YOUR COMMENT REGARDS

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cc: Mr. Ritchie
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Checked for Dispatch:

April 25, 1975

Dear Taff:

I had intended to write you much sooner and thank you and your wife for a most pleasant evening spent at your home. However, like all good intentions, this one has been delayed by the expected amount of paper work on my return to Washington.

We are now in the midst of looking at the center programs and budgets, ICRISAT amongst them, so life is pretty busy at the moment. However, I hope it won't be too long before you have your facilities at ICRISAT and I shall look forward to visiting you in your new "environment."

With best regards to your wife and to yourself,

Yours sincerely,

John K. Coulter

Dr. J. C. Davies
International Crops Research Institute
for the Semi-Arid Tropics
1-11-256, Begumpet
Hyderabad-500016, A. P.
India

JKCoulter:apm

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERBAD

DATE: APRIL 25, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366

COUNTRY: INDIA

Page 1 of 2

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CONSEQUENTLY WE BELIEVE SOME OF OVERRUN SHOULD BE MADE UP BY DEFERRING OR

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NAME Michael L. Lejeune

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SECUNDERBAD

DATE: APRIL 25, 1975

CLASS OF
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Page 2 of 2

COUNTRY: INDIA

TEXT:
Cable No.:

FOREGOING A SUBSTANTIAL ELEMENT OF STAFF HOUSING AND OR OTHER CONSTRUCTION
ITEMS STOP (C) WE ALSO NOTE FURNITURE AND EQUIPMENT BUDGET LEAVE ROOM FOR
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FOR 1976 CALLS FOR LARGE INCREASE IN STAFF WHICH FEEL IS OUT OF PHASE WITH RATE
OF COMPLETION OF FACILITIES STOP PARAGRAPH FOLLOWING IS TENTATIVE BREAKDOWN
OF EXPENDITURE BY YEARS:

1975 CAPITAL 5.9 CORE OPERATIONS 3.8 GROUNDNETS 0.3

1976 CAPITAL 6.4 CORE 4.6 GROUNDNETS 0.6

1977 CAPITAL 3.1 CORE 5.0 GROUNDNETS 0.5

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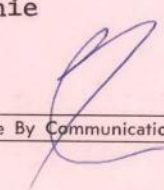
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cc: Mr. Ritchie
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DATE: APRIL 25, 1975
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Page 2 of 2

COUNTRY: INDIA

TEXT
Cable No.

FOR 1976 CALLS FOR LARGE INCREASE IN STAFF WHICH FEEL IS OUT OF PHASE WITH RATE
ECONOMY ON KITCHEN EQUIPMENT, VEHICLES, COMPUTERS ETC AND (D) CORE BUDGET
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OF CONSTRUCTION ON FACILITIES STOP PARAGRAPH FOLLOWING IS TENTATIVE BREAKDOWN
ON EXPENDITURE BY YEARS:

1975 CAPITAL 2.9 CORE OPERATIONS 3.8 GROUNDWATS 0.3
1976 CAPITAL 6.4 CORE 4.6 GROUNDWATS 0.6
1977 CAPITAL 3.1 CORE 2.0 GROUNDWATS 0.2

PANAGRAH DRAFT REPORT BEING MAILED FOR YOUR COMMENT REGARDS

LEJHUNE

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SECTION
COMMUNICATIONS

APR 26 3 00 PM 1975

cc: Mr. Ritchie
Tel: G-7

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6-7

1975 APR 22 PM 1:31

ZCZC 246423 RC026 PDB0779 RNF2285 BSV6097 PIR SVC

URWT BN URSV 000

NEWYORK 00 22 1303 RB

Distribution:

Mr. Lejeune

Apr. 22, 1975

INTDAFRAD WASHINGTONDC

REGARDING OUR MSG RC2/PD10198/RNL8318/KNY039/BDS856/21

FROM SECUNDERABAD DATED 21ST ADDRESSED LT INTDAFRAD

WASHINGTONCUSA X HVITH PAGE FOUR

BDS856/21 PGE 4/19

BE IN USA MAY THREE TO TEN AND WILL BE PREPARED

TO DISCUSS FURTHER STOP

CUNNINGHAM CRISAT SECUNDERABAD

X PER RCA GLOBCOM SERVICE SECTION NEWYORK

CABLE NOTE: REPETITION REQUESTED BY CABLE SECTION, PLEASE REFER TODAY'S CABLE RC002

107588722 17 13 31

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ZCZC 248433 RC002 PD10198 RML8318 KMY059 BDS856/21

URWT HL INBX 169

SECUNDERABAD 169 21 1730 PAGE 1/50

APRIL 21, 1975

LT

INIBAFRAD

WASHINGTONDCUSA

PIL 248433, SUSPECTED DUPE

LEJEUNE URGAD SUGGESTS POSSIBLE MISUNDERSTANDING

OUR BUDGET PROPOSALS STOP EARLIER PROJECTIONS ENVISAGED 12.65

MILLION FOR CORE BUDGET 1974 TARG 1977 STOP GROUNDWAT PROGRAM

WAS SEPARATELY AUTHORIZED BY COLAR WITH UNDERSTANDING

THIS WOULD REQUIRE FADING OUTSIDE ABOVE

CEILING STOP OR VOLUNTARILY AGREED TO SLOWER

INITIAL START

GROUNDWATS AND

~~COL LT 15.65 1974 1977~~

~~BDS856/21 PAGE 2/50~~

~~HAVE PROVIDED ONE HUNDRED SEVENTYFIVE THOUSAND~~

THREE HUNDRED THOUSAND, AND SIX HUNDRED THOUSAND FOR
1975 1976 AND 1977 RESPECTIVELY THIS PROGRAM STOP ONLY
ADDITIONAL AMOUNT PROPOSED CORE BUDGET IS FIVE
HUNDRED THOUSAND AND SIX HUNDRED
THOUSAND FOR 1976 AND 1977 RESPECTIVELY
IN VIEW INFLATED COSTS STOP
THESE AMOUNTS WELL BELOW

COL 1975 1976 1977 1978 1977

BDS856/21 PAGE 2/30

CURRENTLY PROJECTED INFLATIONARY COST INCREASES
STOP CAPITAL BUDGET STILL PROJECTED AT 17.35 MILLION FOR
PARTIAL CONSTRUCTION WITH ESTIMATED ADDITIONAL 5.5
APPROXIMATELY 5.5 MILLION TO COMPLETE PLANNED PHYSICAL PLANT STOP
COOPERATIVE PROGRAMS AFRICA ETC
HANDLED AS SPECIAL PROJECTS OUTSIDE CORE
AND CARRIED OUT AS FUNDING IS APPROVED
INDIVIDUALLY STOP ETC SHALL

COL 17.35 5.5

BDS856/21 PAGE 4/13

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0002

CABLE NOTE: TEXT AS RECEIVED

248423A IBRD UR

105900 UDSTH S

(Telex Nr.)

INCOMING TELEX

67

From: Stockholm

1975 APR 23 10:05

Distribution:

Mr. Lajeune

CABINET STOCKHOLM 1975-04-23

INTSABRAD WASHINGTON

EXECUTIVE SECRETARY, INT. B. S. S.

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

GRATEFUL YOUR ADVISE AS TO DISBURSEMENT OUR 1975 CONTRIBUTION

FOR ICRISAT. REGARDS Ulf HERRINGSSON, FOREIGN MINISTER, STOCKHOLM.

CABINET STOCKHOLM 1975-04-23

248423A IBRD UR

105900 UDSTH S

G 7

MEETING THE FOOD CRISIS

DRYLAND FARMING

By

Ralph W. Cummings

Director

International Crops Research Institute for the Semi-Arid Tropics
Hyderabad, India

Almost half of India's six hundred million people derive their livelihood and their food sustenance from farming on lands which are rainfed, are low in fertility, and for which sustained supplies of irrigation water from sources other than that which falls directly on their land is not in prospect. This situation applies to an equal number of people on other continents situated in tropical climates and a very substantial number in temperate zones as well.

While we commonly refer to this type of agriculture as dryland farming, this is not, strictly speaking, correct. Crops will not grow and produce a harvest of grain, fodder, or fiber without water. And on most of these areas, the total amount of rain which falls on the land, year in and year out, is sufficient to produce at least one good crop per year and in many cases two, if it could all be used effectively and efficiently. But its uneven and uncertain distribution, the high intensity of individual storms and consequent heavy loss by runoff (with attendant soil erosion), the alternation between periods of too much and too little rain, the long dry periods, and the uncertainty and unpredictability of rainfall occurrence still make drought and water stress one of the great restraints to sustained high level crop production in the rainfed agriculture of the tropics and so, it is the dryland aspect of this sector of agriculture which we need to overcome.

The great breakthroughs which have occurred in recent years, paving the way for making it possible for farmers to have confidence that they can make the investments necessary for very much higher yields and profitable returns - the green revolution - which have come to irrigated lands and those with dependable moisture, have thus far largely eluded the farmers dependent on rainfed agriculture. But must this necessarily continue to be the case? I think that it need not be and that a better future can lie ahead for the rainfed farmer if we use our imagination and talents to address ourselves to the task

Broadcast on the All India Radio on 22nd April 1975

and find the right ways to help nature work with us rather than against us. This is the reason the International Crops Research Institute for the Semi-Arid Tropics was established, with broad international backing and support. This Institute hopes to join forces with the great research and development efforts of the Indian national organizations such as the coordinated projects of the Indian Council of Agricultural Research, the State Agricultural Universities, and the State and Central Departments of Agriculture, as well as with those of other nations and continents, to find ways of making rainfed agriculture much more productive, stable and dependable.

First let us review a few of the characteristics of the climate and natural resource base with which we have to work in the semi-arid tropical regions. There are several types of soils with which we have to work, each with its own peculiar type of management requirements. Some are quite sandy and permeable to water. Some are red in colour with limited clay content and with clay of a type which swells little when wet. These can become quite hard and compact when dry. Some are of a heavy black clay which shrinks and develops large cracks when dry but which become very sticky and difficult to work and may even become waterlogged when wet. Some soils are underlain at variable depths with a hard consolidated iron pan (laterite) which is very impervious to both water and crop root penetration. Generally speaking, the soils of the semi-arid tropics are low in natural fertility. The available phosphorus supply is likely to be seriously short and the nitrogen supply is generally limiting.

Next let us consider the rainfall and moisture supply pattern. Temperatures tend to be quite high for at least several months of the year and evaporation losses from open water surfaces, or transpiration demands of water by crop plants during these months are very high. Only when the rainy season arrives (from late May to July in the northern hemisphere or late November to January in the southern) and extending for a period of two and one half to four and one half or five months, does the total rainfall equal or exceed the potential evaporation or transpiration losses. But even during this period we do not escape moisture stress and this is a period when we must exercise great care if we are to make the most of our opportunities. Rains frequently come with very high intensity, greatly exceeding the capacity of the unprotected soils to absorb them, resulting in loss of a large part of the water to the streams, carrying with it heavy loads of the surface soil and fertility. Then come intervening periods without rain during which moisture stress may become acute unless we have made adequate provision to tide over these situations.

A large portion of the farms in the semi-arid tropical rainfed areas are small, the capital resources of the farmer are limited, and his supply of power is often limited to the muscle of himself and family and perhaps a pair of bullocks. This places narrow limits on the size of his operations and necessitates measures to assure the best harvest possible from the limited amount of land he cultivates.

The dryland farmer, then, needs to give simultaneous attention to (1) the management of his land so as to make the most efficient and effective use possible of all the water which falls on it to get a dependable crop harvest and (2) the selection of the crops and crop varieties which will be best able to tide over periods of moisture stress, resist exposure to diseases and pests, and come through to harvest with a dependable, high quality product which will serve his family food needs or bring him a remunerative price in the market.

We believe that very great progress can be made on both fronts and that the rainfed farmer can have high hopes of a better day ahead. Traditional practices may have to be changed and farmers may have to learn to cooperate more among themselves in order to manage their lands and water to best advantage.

First, let me share some of our preliminary experience in soil and water management on the heavy black cotton soils of Central and South India. We have been approaching this on a watershed or catchment area basis, which may necessitate several farmers having land on a given catchment working together. We have used natural water catchment areas no more than one or a few hectares in area (no larger than a single small family farm and in some cases less) on up to areas which would encompass land tilled by several farmers.

Everyone knows that water runs downhill and, unless it meets some obstacle to divert it, it will go downhill by the shortest and steepest route. As water from one area meets water coming from another area it merges and cuts out natural channels which in turn join up and lead into streams and rivers. Our scientists, recognizing that water would follow this pattern tried to devise ways of controlling the movement of water so that as much as possible could be held on the land where it falls long enough to penetrate into the soil and thus reduce the amount which is immediately lost into the streams. This resulted in their looking across the established field boundaries to see just how the water is moving naturally. Once they located

the ridges which separated the directions of natural water movement they were able to lay out some small natural catchment areas. Then after removing the bunds between fields in the small catchment areas, they were able to trace out the low channels in which the water would naturally flow away from the area to the streams. These natural channels were then planted to grass so as to protect them from the cutting action of the concentrated water flow.

The next step was to measure the slopes of the land in the fields and lay out rows along the contours so that each row would slope only very gradually toward the natural drainage channel. Rather than leave the surface flat, they then devised a simple ridger plow which could be pulled by bullocks and which would plow out a channel between each row and throw up a ridge on which the crop could be planted at the beginning of the rainy season. Thus each furrow would hold and carry the water falling on it to the channel. This has proved to have multiple beneficial effects. By slowing the rate of movement of the water, it stays on the land surface longer and more of it penetrates into the soil to carry the crop better over the dry periods between rains and stores more water in the soil for use by a subsequent crop. Erosion losses are greatly reduced, and the soil in the ridges is better drained during periods of heavy rainfall and allows better root development than would occur if the surface had remained flat. Also, soil preparation for subsequent crops after the crop harvest can be done with considerably less power than would be required if the surface had remained flat.

Even this procedure does not retain all the water which falls on the land during the high intensity rains. Therefore, a small tank was dug to collect the water, within the watershed, which was discharged from the rows into the main drainage channels. This harvested water could then be pumped back onto the land from which it came to tide the crop over a critical drought period if needed or to mature a second post monsoon crop under irrigation on part of the land. In one experiment with maize grown on red soils, a single irrigation during a critical dry period doubled the yield from three tons to six tons per hectare. The above techniques have substantially increased yields, reduced erosion losses, and permitted growing two successive crops in sequence or in relay where one would normally have been grown with traditional practices.

This experience is given just by way of illustration of some of the exciting possibilities for greatly increased yields and dependability of production which can accrue from better soil and water management under one situation for rainfed agriculture. Other techniques and other situations are being

studied intensively.

Along with improvements in soil and water management, very exciting possibilities exist in improving the crop selection and the crop varieties to fit the various conditions encountered in rainfed farming. Sorghum, millet, pigeonpeas, and groundnuts are among the major food crops which have the necessary tolerance to the harsh environmental conditions of the semi-arid tropics with summer rainfall. Chickpeas are important under slightly more temperate environments. Cash or industrial and oilseed crops for these regions include cotton, safflower, sunflower, soybeans, and many others.

ICRISAT is assembling the total world's diversity of genetic materials for sorghum, pearl millet, chickpea, pigeonpea and groundnuts and its plant breeders are busily studying these materials and combining them into varieties or populations from which varieties can be selected which meet the needs of the farmers better in the different areas in which they are grown. New and improved varieties will continue to come from the national and state programs. I would predict that the sorghum of the future will move toward a higher yielding plant which is not quite so tall as the traditional varieties, has a higher proportion of light, pearly, bold grains in relation to the amount of stalk, has a better amino acid balance in its proteins and thus a better nutritional quality, matures with an abundance of clean, disease free leaves that will make good quality fodder for livestock, will be more resistant to head molds if matured during wet periods and thus will give a higher quality grain. It will also carry increasing amounts of resistance or tolerance to various pests such as the shootfly, grain midge, stalk borer and witch weed or striga.

The millet of the future will likely be a higher yielding type, with profuse and more or less synchronous tillering, shorter in height than those now commonly grown, but with an abundance of medium length, compact seed heads, and will carry a high degree of resistance to downy mildew (green ear) and ergot. It will not be very sensitive to length of day and will be highly drought tolerant. For the farmer who is able to plant early and take advantage of a reasonably long growing season, it will probably be one from which an early forage cutting can be taken and a good grain crop matured on the tillers which grow out subsequently.

I will not attempt here to describe what we see ahead with the pulse and oilseed crops which will be fitted into these rainfed farming systems but hope the above statement

6.

conveys a sense of hope and confidence that the farmer who has to depend on natural rainfall can look forward to sharing in very exciting advances and a more dependable harvest in the future. Social justice as well as national needs demand that the opportunities for this sector of agriculture be improved and that they may be enabled to make a much larger contribution to the total national welfare and the national product than has been the case to date. We believe that this is highly possible and promising.



File 47

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

April 21, 1975

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

Dear Mr. Lejeune :

I have received your cable sent on 18th April concerning the budget proposal for ICRISAT. It seemed to me from your cable that there may have been some misunderstanding as to what we had presented in our 1976 proposal and accordingly I sent you the following reply by cable :

LEJEUNE URCAB SUGGESTS POSSIBLE MISUNDERSTANDING OUR BUDGET PROPOSALS STOP EARLIER PROJECTIONS ENVISAGED 15.65 MILLION FOR CORE BUDGET 1974 THRU 1977 STOP GROUNDNUT PROGRAM WAS SEPARATELY AUTHORIZED BY CGIAR WITH UNDERSTANDING THIS WOULD REQUIRE FUNDING OUTSIDE ABOVE CEILING STOP WE VOLUNTARILY AGREED TO SLOWER INITIAL START GROUNDNUTS AND HAVE PROPOSED ONE HUNDRED SEVENTYFIVE THOUSAND THREE HUNDRED THOUSAND AND SIX HUNDRED THOUSAND FOR 1975 1976 AND 1977 RESPECTIVELY THIS PROGRAM STOP ONLY ADDITIONAL AMOUNT PROPOSED CORE BUDGET IS FIVE HUNDRED THOUSAND AND SIX HUNDRED THOUSAND FOR 1976 AND 1977 RESPECTIVELY IN VIEW INFLATED COSTS STOP THESE AMOUNTS WELL BELOW CURRENTLY PROJECTED INFLATIONARY COST INCREASES STOP CAPITAL BUDGET STILL PROJECTED AT 17.35 MILLION FOR PARTIAL CONSTRUCTION WITH ESTIMATED ADDITIONAL NEED OF APPROXIMATELY 3.5 MILLION TO COMPLETE PLANNED PHYSICAL PLANT STOP COOPERATIVE PROGRAMS AFRICA ETC HANDLED AS SPECIAL PROJECTS OUTSIDE CORE AND CARRIED OUT AS FUNDING IS ARRANGED INDIVIDUALLY STOP EYE SHALL BE IN USA MAY THREE TO TEN AND WILL BE PREPARED TO DISCUSS FURTHER STOP REGARDS - CUMMINGS

I should like to elaborate a little further on this. Subsequent to the meeting in April of 1974 when we were asked to plan our budget expenditures within a total ceiling of \$33 million for capital and recurring expenses for the period 1974 thru 1977,

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
ICRISAT



Director, ICRISAT
Patancheru, Andhra Pradesh
India

City Office
1-17-258, Bagmati
Hyderabad-500016, A.P., India

April 21, 1975

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

Dear Mr. Lejeune:

I have received your cable sent on 18th April concerning the budget proposal for ICRISAT. It seemed to me from your cable that there may have been some misunderstanding as to what we had presented in our 1976 proposal and accordingly I sent you the following reply by cable:

LEJEUNE URGES POSSIBLE MISUNDERSTANDING OUR BUDGET PROPOSALS STOP EARLIER PROJECTIONS ENVIAGED 12.65 MILLION FOR CORE BUDGET 1974 THRU 1977 STOP GROUNDWATER PROGRAM WAS SEPARATELY AUTHORIZED BY CGAR WITH UNDERSTANDING THIS WOULD REQUIRE FUNDING OUTSIDE ABOVE CEILING STOP WE VOLUNTARILY AGREED TO SLOWER INITIAL START GROUNDWATER AND HAVE PROPOSED ONE HUNDRED SEVENTY-THOUSAND THREE HUNDRED THOUSAND AND SIX HUNDRED THOUSAND FOR 1975 1976 AND 1977 RESPECTIVELY THIS PROGRAM STOP ONLY ADDITIONAL AMOUNT PROPOSED CORE BUDGET IS FIVE HUNDRED THOUSAND AND SIX HUNDRED THOUSAND FOR 1976 AND 1977 RESPECTIVELY IN VIEW INFLATED COSTS STOP THESE AMOUNTS WELL BELOW CURRENTLY PROJECTED INFLATIONARY COST INCREASES STOP CAPITAL BUDGET STILL PROJECTED AT 17.35 MILLION FOR PARTIAL CONSTRUCTION WITH ESTIMATED ADDITIONAL NEED OF APPROXIMATELY 3.5 MILLION TO COMPLETE PLANNED PHYSICAL PLANT STOP COOPERATIVE PROGRAMS AFRICA ETC HANDLED AS SPECIAL PROJECTS OUTSIDE CORE AND CARRIED OUT AS FUNDING IS ARRANGED INDIVIDUALLY STOP EYE SHALL BE IN USA MAY THREE TO TEN AND WILL BE PREPARED TO DISCUSS FURTHER STOP RECORDS - CUMMINGS

I should like to emphasize little further on this. Subsequent to the meeting in April of 1974 when we were asked to plan out budget expenditures within a ceiling of \$33 million for capital and recurring expenses for the period 1974 thru 1977.

we projected the requirements as follows :

<u>Year</u>	<u>Core Operating</u>	<u>Capital</u>
1974	2.60	3.00
1975	3.75	6.50
1976	4.50	5.50
1977	4.80	2.35
	<hr/>	<hr/>
Total	15.65	17.35
	<hr/>	<hr/>

We have been following these basic figures very closely in subsequent projections, even though inflation has caused a rather substantial increase in the costs of many of the things that we have to purchase. The only differences which we have put into our 1975 budget and the 1976 projections are the following :

1. The groundnut program. This was recommended by the Technical Advisory Committee and approved by the Consultative Group. In our 1975 budget proposal we had anticipated a total of \$300,000 for this program for 1975, \$560,000 for 1976, \$480,000 for 1977, \$520,000 for 1978, and \$600,000 for 1979. At the request of the Consultative Group we agreed to develop this project a little more slowly and put in only \$175,000 for 1975 in our final budget plan and are projecting \$300,000 for 1976 hoping to reach the \$600,000 level for capital and operating for this portion of the program in 1977. The groundnut program was approved with the clear understanding that this would be over and above the previously approved budget and could only be undertaken if additional funds were available. Our projections for the groundnut work for 1975 and 1976 are well below the amounts which were in the budget proposals at the time the approval was given for us to proceed with this program.

2. At the time Mr. Ruddy and Mr. Coulter were here, they repeatedly called attention to the fact that we were faced with rapidly mounting costs of supplies and materials and labour, and asked us to make projections as to the effect of these inflationary trends on our budget. We did not escalate the budgets on this account for 1975 but agreed that we would stay in within the previously approved levels for 1975

Mr. Michael Lejeune

Page ..3
April 21, 1975

even if we had to slow down the rate at which we had proposed to develop our program. We did add \$500,000 in our proposal for 1976 and \$600,000 in 1977 on this account. We believe these are very conservative figures. If this additional amount cannot be added to the core operating budget, we will simply have to adjust the rate of development of our program accordingly.

With reference to the capital projection we are still holding to the \$17.35 figure unless the Consultative Group can find a way to lift the ceiling. As Mr. Ruddy and Mr. Coulter must have explained to you, they were in agreement that it would take somewhere between \$3 and \$3 1/2 million more than the projected \$17.35 million to enable us to complete our planned physical plant. We certainly hope that at least a portion and hopefully all of this can be found.

I felt that we had been quite conservative in our budget projections and do hope that they will receive very sympathetic consideration.

We appreciate the problems which your office has and which the various donors have in supplying the necessary funds for all of the institutes which have been approved. We will try to do the very best we can in moving toward the goals which have been set up for this Institute and its program with the funds which are made available to us. When the ceiling was set on expenditures for this Institute for the period 1974 thru 1977, we felt that the Consultative Group was doing its best to help us adjust to the realities of the situation and would make every effort to see that we have the best level support they could provide to enable us to carry our program forward vigorously. We still believe that this is the case and know that you will do everything you reasonably can to make this possible. Although this Institute is the only one, insofar as I know, on which a specific ceiling of expenditures has been imposed, I am sure you will not let this handicap us unduly toward moving forward with the program we have been asked to develop.

As indicated in my cable, I shall be in the USA during the period May 3 thru 10 and will contact your office to see if we can supply additional information which will help to clarify the situation. We are still going through each of the segments of this budget carefully to see what adjustments may be necessary within these totals and will be reviewing the proposals with the Executive Committee when it meets on May 22 to 24. Our final budget proposals will be sent forward following this meeting of the Executive Committee.

With highest regards, I am,

Sincerely yours,

Ralph W. Cummings

Ralph W. Cummings
Director

cc : Dr. C. F. Bentley

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: APRIL 18, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366
(Ext. 3592)

COUNTRY: INDIA

TEXT:
Cable No.:

RUDDY/COULTER REPORT WHICH RECOMMENDS MODEST INCREASE IN 33 MILLION DOLLAR
CEILING NOW UNDER DISCUSSION STOP EYE WILL ADVISE YOU AS SOON AS POSSIBLE
OF OUR CONCLUSIONS AND PROPOSED APPROACH TOWARDS OBTAINING DONORS' APPROVAL
OF NEW CEILING STOP BELIEVE IMPORTANT FOR YOU TO KNOW THAT INCREASE PROPOSED
IN YOUR DRAFT BUDGET OF APRIL ONE TOGETHER WITH CURRENT COSTS OF CAPITAL
PLAN EXCEEDS BY WIDE MARGIN THE OVERALL INCREASE WE ARE PREPARED TO
RECOMMEND TO DONORS STOP IN OUR JUDGMENT, FUNDING FOR CORE AND CAPITAL ON
THE LEVEL YOU HAVE IN MIND IS UNLIKELY STOP IN VIEW OF THIS YOU MAY WISH
TO RECONSIDER YOUR 1976 BUDGET AND TAKE STEPS TOWARD BRINGING RECURRENT COSTS
FOR 1974 THROUGH 1977 MORE INTO LINE WITH EARLIER FIGURES STOP WE SHALL CABLE
YOU SHORTLY LEVEL WE FEEL SECRETARIAT COULD RECOMMEND IN LIGHT OF FUNDING
PROSPECT FOR CGIAR SYSTEM AS A WHOLE FOR 1976 AND 1977 REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

~~ME~~Ruddy:MLLejeune:ia

Files: G-7

For Use By Communications Section

Checked for Dispatch: 

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: CUMMINGS
CRIST
SECUNDERABAD

DATE: APRIL 18, 1975
CLASS OF SERVICE: TRIPLEX: ICRISMA-025-366
(Ext. 3592)

COUNTRY: INDIA

TEXT:
Cable No.

REPLY/COUNTER REPORT WHICH RECOMMENDS MODERATE INCREASE IN 33 MILLION BELLAR
CELLING NOW UNDER DISCUSSION STOP EYE WILL ADVISE YOU AS SOON AS POSSIBLE
OF OUR CONCLUSIONS AND PROPOSED APPROACH TOWARDS OBTAINING DONORS' APPROVAL
OF NEW CELLING STOP BELIEVE IMPORTANT FOR YOU TO KNOW THAT INCREASE PROPOSED
IN YOUR DRAFT BUDGET OF APRIL ONE TOGETHER WITH CURRENT COSTS OF CAPITAL
PLAN EXCEEDS BY WIDE MARGIN THE OVERALL INCREASE WE ARE PREPARED TO
RECOMMEND TO DONORS STOP IN OUR JUDGMENT, FUNDING FOR CORE AND CAPITAL ON
THE LEVEL YOU HAVE IN MIND IS UNLIKELY STOP IN VIEW OF THIS YOU MAY WISH
TO RECONSIDER YOUR 1976 BUDGET AND TAKE STEPS TOWARD BRINGING RECURRENT COSTS
FOR 1974 THROUGH 1977 MORE INTO LINE WITH EARLIER FIGURES STOP WE SHALL CABLE
OUR SHORTLY LEVEL WE FEEL SECRETARIAT COULD RECOMMEND IN LIGHT OF FUNDING
PROSPECT FOR CGIAR SYSTEM AS A WHOLE FOR 1976 AND 1977 REGARDS

TELETYPE

APR 18 9 30 PM 1975
COMMUNICATIONS

DISPATCHED

NOT TO BE TRANSMITTED

AUTHORIZED BY

NAME: Michael J. Lejune

DEPT: CGIAR Secretariat

Files: C-7

REPLY: MLE:june:la

CLEARANCES AND COPY DISTRIBUTION

SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

SIGNATURE

REFERENCE

ORIGINAL (File Copy)

IMPORTANT: See Secretariat Guide for copying form

Checked for Dispatch

For Use by Communications Section



67

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

April 8, 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

~~M/s. Standard Elektrik Lorenz AG
Central Export Finance Dept
Box 40 07 49
D-7000 Stuttgart 40
Germany~~

Dear Sirs :

Sub : Your Offer For One Crossbar Grosscitomat - Our
Enquiry No. M&E/T-TEL-1 - Payment Terms.

Please refer to your letter No. ZF/EXFI-S/MI dated March 11, 1975 addressed to Mr. Harold Graves, Executive Secretary, CGIAR, World Bank, Washington, and his reply to you dated March 21, 1975 regarding the above subject.

In your above letter, you have indicated as follows :

"An offer for one Crossbar Grosscitomat was sent by us to the above mentioned institute, who informed us in the meantime that, in case we should be favoured with an order, payment would be effected out of World Bank funds".

We have gone through the correspondence sent by us in respect of this enquiry and do not find any statement to the effect that "payment would be effected out of World Bank funds". There is apparently some misunderstanding on this aspect. We would like to clarify that the payment would be made by us from our own funds, and not from the World Bank funds. We receive donations from various Governments and International Organizations including the World Bank and the United Nations Development Programme. Our bank account is maintained with the First National City Bank, New York, and we will be in a position to make payments through that bank in any currency, should the above order be placed on your firm.

Now that you have received a reply from Mr. Harold Graves, we hope you are convinced about the ICRISAT's financial standing. Should you have any further questions in this regard, we will be glad to clarify the same.

Your quotation for the above equipment has been received by us through your Indian representatives, M/s.Jost's Engineering Co.Ltd., Bombay, and is receiving our attention.

Very truly yours

RWC

Ralph W. Cummings
Director

✓ cc: The Executive Secretary
CGIAR, World Bank
1818 H Street, NW
Washington D C 20433/USA

RECEIVED
DEC 18 1966
WASH DC

1 2 1

Your quotation for the above equipment has been received by
us through your Indian representatives, M/s. Jost's Engineering Co. Ltd.,
Bombay, and is receiving our attention.

Very truly yours


Ralph W. Cummings
Director

cc: The Executive Secretary
✓
CGIAR, World Bank
1818 H Street, NW
Washington D C 20433/USA

RECEIVED
1975 APR 16 AM 11:47
INCOMING MAIL UNIT

OUTGOING WIRE

TO: CUMMINGS

DATE: April 7, 1975

CLASS OF
SERVICE:

TELEX: *LT*
~~ICRISAT 015-366~~

COUNTRY: ICRISAT
SECUNDERABAD

India

TEXT:
Cable No.:

TR

I BELIEVE I MADE OFF WITH SOME OF YOUR RUPEES STOP PLEASE LET ME KNOW
WHAT I OWE YOU AND I WILL SEND CHECK STOP WILL BE DISCUSSING OUR VIEWS
WITH MR LEJEUNE TODAY STOP MANY THANKS TO YOU AND YOUR STAFF FOR THE
HOSPITALITY AND ASSISTANCE DURING OUR VISIT

REGARDS

M.E. Ruddy

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael E. Ruddy, Program Coordinator

DEPT. Office of Vice President/ East Asia & Pacific
Region

SIGNATURE *M.E. Ruddy*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

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ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *✓*

INTERNATIONAL FINANCIAL
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

April 7, 1975

DATE

COUNTRIES

TO

CLASS OF
SERVICE

CLASS OF
SERVICE

COUNTRY

NEW ZEALAND
SECURITY

TEXT

Cable No.

I BELIEVE I MADE ONE WITH SOME OF YOUR NUMBER STOP PLEASE LET ME KNOW
WHAT I OWN YOU AND I WILL SEND CHECK STOP WILL BE DISCUSSING OUR VIEWS
WITH MR. MURPHY TODAY STOP MANY THANKS TO YOU AND YOUR STAFF FOR THE
HOSPITALITY AND ASSISTANCE DURING OUR VISIT

RECORDS

M. E. Ruddy

NOT TO BE TRANSMITTED

CLEARANCE AND COPY DISTRIBUTION

AUTHORIZED BY

NAME Michael E. Ruddy, Program Coordinator

DEPT Office of Vice President/ East Asia & Pacific Region

SIGNATURE M. E. Ruddy

For Use By Communications Section

ORIGINAL (File Copy)

IMPORTANT: See Section Guide for Disposal (Rev. 10-70)



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

67

Phones : 72091, 72628
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-368

CITY OFFICE:
1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

April 7, 1975

His Excellency
The Ambassador from the Netherlands to India
New Delhi

Dear Sir:

I am grateful for your message sent by telex advising that a sum of \$58,000 has been deposited to our account in the First National City Bank, New York, representing one third of the Dutch contribution of 1975 to the Institute. We are most grateful to you and to your government for this very excellent support.

I note from your message that your Government is awaiting receipt of the financial report of the Institute for 1974. I am pleased to advise that this has now been completed and the report from our auditors of the 1974 account has just been received. I am forwarding herewith a copy of this financial report, and am sending additional copies to your Government in The Hague.

With highest regards, I am,

Sincerely yours

RWC

Ralph W. Cummings
Director

Encl:

cc: Mr. K.T. de Wilde
Dr. G. de Bakker
Mr. Penning Devries
Mr. M. Lejeune ✓

RWC:jg



INTERNATIONAL CROSS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



CITY NAME
STATE AND COUNTRY
POSTAL ADDRESS

NAME OF THE PERSON
TO WHOM THE LETTER IS SENT
ADDRESS

APRIL 1975

The following information is being furnished to you for your information.



It is requested that you advise the Institute of any changes in your address or any other information that may be of interest to the Institute. The Institute is interested in the progress of your research and in the results of your work. The Institute is also interested in the results of your work in the field of semi-arid tropics.

The Institute is interested in the progress of your research and in the results of your work. The Institute is also interested in the results of your work in the field of semi-arid tropics. The Institute is interested in the progress of your research and in the results of your work. The Institute is also interested in the results of your work in the field of semi-arid tropics.

Yours faithfully,



RMC

Dr. R. M. Choudhury
Director

RECEIVED
1975 APR 22 PM 12:04
INCOMING MAIL UNIT





✓ Central ~~Mr. Lejeune~~
File ~~6-7~~

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : 72091, 72628
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-366

CITY OFFICE:
1-11-256, Begumpet,
Hyderabad-500016, A. P., India

April 1, 1975

Mr. Michael Lejeune, Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. Lejeune,

I am enclosing herewith a draft copy of the ICRISAT Program and Budget proposals for 1976. We expect to continue working toward a refinement of these proposals and have scheduled a meeting of the Executive Committee of the Governing Board for May 22-24 to give them final shape.

In our proposal for 1975, we still plan to stay within the projected total of \$3,925,000 for the core operating budget (\$3,750,000 plus \$175,000 for groundnuts), even if the mounting costs should require us to go a little slower in staff and program development than we had planned. The estimates for 1976 and 1977 include our projected costs for the groundnut project and we have increased the budgets by \$500,000 and \$600,000 above our earlier estimates for the two years, respectively to partially compensate for the accelerated inflation in operating costs.

We shall welcome your comments and suggestions.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

Encls:

RWC:jg

ICRISAT - HYDERABAD
1976 - BUDGET
TABLE OF POSITIONS AND MANPOWER

TABLE: IV

ORGANIZATION UNIT	SENIOR PRINCIPAL STAFF										SENIOR SCIENTIFIC AND SUPERVISORY STAFF									
	POSITIONS					MANYEARS					POSITIONS					MANYEARS				
	Actual	Bud.	Cur.	Est.	Actual	Bud.	Cur.	Est.	Actual	Bud.	Cur.	Est.	Actual	Bud.	Cur.	Est.	Actual	Bud.	Cur.	Est.
	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976
I. Program Units:																				
Farming Systems	2	2	4	3	5	2	2	4	2.2	3.9	2	-	1	1	1	2	-	1	.5	1
Plant Sciences	1	9	15	12	18	.4	5.2	14.5	10.5	14.2	6	3	13	3	4	2	3	11	2.5	4
Ground Nut	-	-	-	3	4	-	-	-	1.5	3.5	-	-	-	-	-	-	-	-	-	-
Agriculture Economics	-	3	2	2	2	-	1.8	2	2	2	-	1	1	1	1	-	.4	1	1	1
Bio-Chemistry Food	-	1	1	1	1	-	.2	1	1	1	1	-	1	-	-	.25	-	1	-	-
Tech. and Nutrition	-	-	1	1	1	-	-	1	.5	1	1	-	1	-	-	.5	-	1	-	-
Training and Demonstration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conference and Symposia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total:	3	15	23	22	31	2.4	9.2	22.5	17.7	25.6	10	4	17	5	6	4.75	3.4	15	4	6
II. Support Operations:																				
(a) Service Activities:																				
Library & Documentation	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	.25	1	1	1	1
Information Services	-	1	2	2	2	-	1	2	1.4	2	-	-	2	1	2	-	-	1.8	.8	2
Common Lab. Services	-	-	1	1	1	-	-	.5	.2	1	1	-	1	1	1	.25	-	1	.3	1
Farm Services	1	1	1	1	1	.5	1	1	.5	.5	1	3	3	2	2	.6	3	3	2	2
Transportation Motor Pool	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-
Statistics	-	-	-	1	1	-	-	-	.3	1	-	-	-	1	2	-	-	-	.3	1.5
Sub Total:	1	2	4	5	5	.5	2	3.5	2.4	4.5	3	4	8	6	8	1.1	4	7.8	4.4	7.5
(b) General Administration:																				
Board of Trustees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office of Director	3	3	5	4	4	2.3	2.8	5	3.3	4	-	-	-	-	-	-	-	-	-	-
Physical Plant Services	1	1	1	1	1	1	1	1	.5	.5	3	2	3	2	2	2.25	2	3	2	2
Sub Total:	4	4	6	5	5	3.3	3.8	6	3.8	4.5	4	2	4	2	2	2.5	2	4	2	2
TOTAL:	8	21	33	32	41	6.2	15	32	23.9	34.6	17	10	29	13	16	8.35	9.4	26.8	10.4	15.5

ICRISAT - HYDERABAD
1976 - BUDGET
TABLE OF POSITIONS AND MANPOWER

TABLE: IV - CONT'D

ORGANIZATION UNIT	JR. TECHNICAL/ADMINISTRATIVE STAFF										OTHER SUPPORT STAFF									
	POSITIONS					MANYEARS					POSITIONS					MANYEARS				
	Actual	Bud.	Cur.Est.	Est.		Actual	Bud.	Cur.Est.	Est.		Actual	Bud.	Cur.Est.	Est.		Actual	Bud.	Cur.Est.	Est.	
	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976	1973	1974	1975	1975	1976
I. PROGRAM UNITS:																				
Farming Systems	10	12	20	23	33	10	11.2	19.2	14.7	29.2	16	9	18	16	23	16	9	16.2	11.4	20.5
Plant Sciences	29	43	85	77	98	9.8	30.2	79	68.8	90.9	48	19	44	62	88	15.8	12.3	41	57.9	79.3
Ground Nut	-	-	-	3	4	-	-	-	3	4	-	-	-	18	18	-	-	-	9	18
Agriculture Economics	-	8	10	16	16	-	4.1	10	12.6	16	-	1	7	3	3	-	.3	5	3	3
Bio-Chemistry Food																				
Tech. and Nutrition	5	5	7	7	11	1.3	3.8	7	6.5	10.7	8	1	2	3	3	2	.7	2	2	3
Training and Demonstration	5	-	5	2	3	2.5	-	5	1.5	2.5	8	-	1	4	4	4	-	1	2.5	4
Conference and Symposia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total:	49	68	127	128	165	23.6	49.3	120.2	107.1	153.3	80	30	72	106	139	37.8	22.3	65.2	85.8	127.8
II. Support Operations:																				
(a) Service Activities:																				
Library & Documentation	3	2	7	4	5	.8	1.8	6.2	3.7	4.5	6	3	3	4	10	1.5	1.5	3	3.5	9.8
Information Services	2	5	5	8	11	.5	3.3	4.5	7	11	2	-	7	6	10	.5	-	6	4.5	10
Common Lab. Services	3	-	7	6	9	.8	-	6.5	4	7.5	-	-	1	1	1	-	-	1	.7	1
Farm Services	3	8	9	12	17	2.5	3.9	9	10.8	17	-	70	58	78	93	-	20.7	58	70.7	90.5
Transportation Motor Pool	-	-	1	-	-	-	-	1	-	-	22	29	16	30	30	13.5	18.8	16	24	30
Statistics	-	-	1	2	3	-	-	1	1	2.5	-	-	-	1	3	-	-	-	1	3
Sub Total:	11	15	30	32	45	4.6	9.0	28.2	26.5	42.5	30	102	85	120	147	15.5	41.0	84	104.4	144.3
(b) General Administration:																				
Board of Trustees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office of Director	15	28	27	32	33	9.8	21	27	31.5	33	-	66	78	92	125	-	44.3	77.5	87.8	125
Physical Plant Services	4	6	22	9	9	3.8	4.1	20.5	3.5	5.5	40	8	6	13	13	38.3	3.8	5.5	6	10.5
Sub Total:	19	34	49	41	42	13.6	25.1	47.5	35	38.5	40	74	84	105	138	38.3	48.1	83	93.8	135.5
TOTAL:	79	117	206	201	252	41.8	83.4	195.9	168.6	234.3	150	206	241	331	424	91.6	111.4	232.2	284	407.6

1976
PROGRAM
AND
BUDGET PROPOSALS

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

1-11-256 BEGUMPET

HYDERABAD 500016, A.P., INDIA

I. THE MISSION OF ICRISAT

ICRISAT has four main objectives:

1. To serve as a world center to improve the genetic potential for grain yield and nutritional quality of sorghum, pearl millet, pigeonpea, chickpea and groundnuts.
2. To develop farming systems which will help to increase and stabilize agricultural production through better use of natural and human resources in the seasonally dry semi-arid tropics.
3. To identify socio-economic and other constraints to agricultural development in the semi-arid tropics and to evaluate alternative means of alleviating them through technological and institutional changes.
4. To assist national and regional research programs through cooperation and support and contributing further by sponsoring conferences, operating international training programs and assisting extension activities.

Behind those goals lies a recognition of uncertainty, of marginal conditions, and -- most of all -- of urgency. For the 500 million persons who live in the world's semi-arid tropics, uncertainty is part of daily existence. They depend upon rainfed agriculture for their livelihood. Unfortunately, the rains of the semi-arid tropics are erratic, not only from season to season, but within seasons and within relatively small areas. The farmers of these regions on four continents grow marginal crops on marginal soils. They have little capital to invest in costly inputs.

The past decade's advances in yields over the more favoured tracts of irrigated land have had little impact on agriculture in the semi-arid tropics. The urgency of ICRISAT's mission provided strong motivation for the handful of scientists who launched our 1972-73 Farming Systems research program. The 1973-74 season marked the beginning of an ambitious crop improvement program. This past year, our third year of operation, brought the needed addition of a comprehensive economics and statistics program and some of the physiologists, entomologists, pathologists and biochemists to round out the Institute's interdisciplinary program teams.

ICRISAT's development has been rapid. About one third of its 1394 hectare research station has undergone transformation from its traditional use to precision experimental fields and developed watersheds. Fencing, roads, culverts, ponds and drainage ways have been constructed. Temporary laboratories and offices have been established and construction work on permanent research facilities is underway.

But the staff are most concerned with the advancement of research and activities which directly relate to ICRISAT's four objectives. Although only about half of the projected international staff are on board, early accomplishments have laid the groundwork for future investigations and programs in several areas.

The Highlights

CROP IMPROVEMENT

Germplasm. Thousands of lines of the four crops - sorghum, millet, pigeonpea, and chickpea - including exotic types and wild relatives, have been gathered from all continents and put in the "germplasm banks". This

genetic wealth is already being exploited for all valuable characteristics. Further survey and collection trips are planned to enable systematic assembly of all genetic stock before valuable types are lost. A contract has been signed with North Carolina State University which will provide prompt accession of a comprehensive germplasm collection of groundnuts.

Breeding. Crossing work has progressed rapidly in all four crops. By planting three crop generations of sorghums and millets during the first two years of crop improvement operations, composite populations have been advanced rapidly.

New records have been established for the number of crosses made in the self-pollinating chickpea and pigeonpea crops both at Hyderabad headquarters and in off-season nurseries.

Related Studies. ICRISAT plant breeders are supported by physiologists, entomologists, pathologists and biochemists in their search for every conceivable genetic source of pest resistance, drought tolerance, grain quality and consumer-desired characteristics. The teams have already found some potential for making sure the farmer has these traits in the seed, so they won't have to be "purchased" after planting.

FARMING SYSTEMS

The farming systems program is about to enter its fourth year of studies. Specific studies on intercropping, relay cropping, ratooning, method of planting, fertilization, protective "life saving" monsoon irrigation with stored runoff water, root development and other agronomic aspects have already yielded important data and provided leads for future research.

Observations on resource management involving a monitoring of experimental features of improved farming systems on several natural black and red soil watershed have been made continuously for two years. Although the program is in its infancy, several important findings can be cited: a ridge and furrow system has been found to effectively manipulate runoff, reduce drainage problems and erosion and increase infiltration; a system of grassed waterways has been developed and proven to be an efficient means of carrying runoff with minimal erosion loss; experimental design of a small, comparatively deep pond resulted in minimising evaporation and seepage losses; and increasing water use efficiency. Comparisons of production from alternative cropping systems revealed a potential for increasing yields several fold over the present agricultural output in the semi-arid tropics. Rainfall use efficiency in 1973-74 studies was estimated to be 20% higher on improved experimental watersheds compared with traditional systems.

ECONOMICS AND STATISTICS

Hardly one year after beginning its work, the Economics and Statistics unit can list several valuable contributions to the crop improvement and farming systems programs. In an effort to assist in establishing guidelines for the plant breeders, ICRISAT economists have launched a series of market studies to determine consumer preferences in all four crops. A preliminary general study on human nutritional status in the semi-arid tropics based on secondary data has been carried out. This has strengthened the need for research on greater production of more calories and more protein of high nutritive value per unit area. The necessity of looking into problems of starch and other nutritional aspects of grain has also been revealed.

On the production side, economists are monitoring inputs and conducting cost/benefit studies, particularly on farming systems agronomic trials and watershed investigations. These studies will yield data which will help to establish guidelines for research priorities and experiment design.

The Economics and Statistics unit has also launched a series of independent studies related to ICRISAT's third objective. These are continuing studies with both immediate and long time goals. The most advanced of these studies are (1) compilation of statistical data on the various countries and regions of the semi-arid tropics; (2) a village-level study of traditional farming systems; and (3) a study of the water storage facilities in India. The immediate objective of these studies is to increase our understanding of existing practices; a necessary first step to conducting more detailed investigations on modern technology and the associated problems of constraints to adoption, influence of risk and government policy and economic and nutritional impact.

The urgency of achieving the Institute's research goals is matched by the urgency of establishing a research and extension communications network to reach the most remote farmer of the semi-arid tropics. We have moved rapidly on several fronts.

Visitors. ICRISAT hosted over one thousand official visitors from 37 different countries in its second year of operations. Last year, the number more than doubled, not counting casual "drop-in" visits from local and travelling agriculturists.

International Workshops. ICRISAT sponsored two international workshops in the 1974-75 research year. An International Workshop on Farming Systems was held November 18-21 and on Grain Legumes from January 13-15. The immediate benefit from review of both programs has been great and we expect the continuing two-way flow of information which will have a decided impact on the research for many years.

Training. Four Nigerian agricultural officers completed a seven-month pilot training program on November 16, 1974. In addition, several of ICRISAT's program units have conducted short-term training programs for Indian participants. These early experiences have helped to formulate some important training principles which can be put to use as we launch our official training program this year. The senior training officer joined duty in April and seven participants from Nigeria will arrive in May. Shorter term training programs for field investigators in village studies and for experiment station management staff of cooperating institutions have also been carried out.

Cooperating Centers. ICRISAT's first foreign-based staff member begins work at Farako-Ba station, Bobo-Dioulasso (Upper Volta) this year following intensive French language training in France. Arrangements are well advanced toward putting into effect a comprehensive cooperative network on sorghum and millet improvement in twelve countries of West Africa. With UNDP support cooperative research teams will be located in Samaru, Nigeria; Bambey and Louga, Senegal; and Niger, in addition to Upper Volta. Additional support is anticipated from other sources. We have given the West African/Sahel region highest priority, but have also laid the groundwork for programs in East Africa and Northeast Brazil. These links will be formalized as soon as possible.

THE 1976 PROGRAM AND BUDGET APPRAISALS

The highlights of our research and development activities as presented here in relation to our research goals only tells part of the ICRISAT story. A host of supporting personnel and activities have made these early results possible. In the following sections we have outlined a carefully planned program and budget which we feel will sustain the high productivity of our research programs plus the necessary supporting units. At the same time, the program and budget has been tailored to allow for the systematic growth of each unit to its optimal and programmed level.

II. THE 1976 BUDGET

ICRISAT will require 5,300,000 US dollars for its minimum core programs of research and training in 1976. This represents an increase of \$1,375,000 over the budget for 1975. Of the increase, \$907,000 are due to the fact that ICRISAT is still growing towards part of its originally planned level of staff and core activity. As the construction work has been delayed and by the end of 1976 we still may not have the physical plant facilities available therefore some of the staff which was scheduled to be in position by 1976 will now be postponed for one year more. Considerable rise in cost is due to escalation of prices and contingencies. Individual increases are as follows:

A) Addition of 9 principal scientists brings staffing to a certain level of completion	\$315,000
B) Supervisory, technical, support and labour personnel needs, expanded to sustain the planned research and outreach efforts, require additional inputs	342,000
C) Increased support for outreach efforts through training and conferences	106,000

D) Service needs associated with expanded programs and enlarged staff require increased support of all kinds - petrol, fertilizer, chemicals, electricity, travel, paper, supplies, etc. \$144,000

E) Worldwide increases in prices require a contingency to absorb higher costs (allocating to individual activities is not feasible due to unequal inflationary pressures in the international market from which ICRISAT obtains material and services) 468,000

\$1,375,000

The remainder of the funds received by ICRISAT for 1976 as well as any funds which can be carried forward from 1975 will be applied to its capital development program, the construction of buildings and the acquisition of equipment. The worldwide price escalation and revised tenders which have now been approved indicate that even on minimum facilities 21.0 million dollars will be required out of which 3 million have already been spent by the end of 1974 and the remaining amount is required in 1975, 1976 and possibly in 1977. This is despite all the economy which could be made by going to tenders a second time, reducing the initially planned building program to a slight degree, modification of the plans and specifications and stocking of steel at control price during 1974. In order to complete its physical plant, ICRISAT will require at least 3.5 million dollars above the ceiling amounts established by the Consultative Group for capital and operating funds for the 1974-1977 period.

Does this mean that inflation is covered globally and not by any unit? why is this a contingency? Is there included, or separately, a working cap fund? a genuine contingency fund?

11

III. THE 1976 RESEARCH PROGRAM

<u>Activity</u>	<u>Staff</u>	<u>1976 Expenditures</u>
FARMING SYSTEMS	5 Principal	\$ 436,000

Over its three-years of operation the farming systems program has moved steadily towards a methodological goal: substituting human energy, bullock power, and hand-operated implements for tractors and associated farm machinery.

To some, this might appear to be reverse technology. To those acquainted with the labour-intensive, capital-scarce conditions of the semi-arid tropics it is advancement; an advancement towards a realistic technology which can be embraced by the 500 million people we serve. The program has made other advances in that direction:

- * The First International Workshop on Farming Systems held in November 1974 set new farm-oriented guidelines and added new dimensions to our philosophy of research.
- * New runoff storage ponds of varying size and description have been built by hand and bullock power.
- * Research efforts in hydrology and engineering have moved onto the red soils.
- * A comprehensive economics component has been introduced into our watershed and agronomic research.
- * Agronomic studies involving intercropping, "life-saving" irrigation using stored runoff water, nutrient mobility and root penetration plus many other research areas with direct bearing to on-the-farm practices were expanded.

Investigations in 1976 call for a continuation and intensification of previous work but these new research areas will also be explored: The hydrological relationship of small watersheds to their larger catchment areas must be probed more effectively; screening of crops -- in addition to the five under intensive study in the crop improvement program -- is fundamental to systems development; weeds which sap the precious nutrients and moisture from farmers' fields must be understood and controlled; a lack of scientifically-engineered implements is already a constraint to advancing research; and gross climatological plus microclimatic data are urgently required.

While interdisciplinary teams will probe these and other questions in 1976 at Hyderabad, they clearly recognize the need to develop research at bench mark locations elsewhere in the semi-arid tropics. The greater input of personnel and materials required for the 1976 program phase will continue to move the program in two directions simultaneously. It will demand the most competent scientists and sophisticated research equipment available. But these resources will be brought to bear on, and bring ICRISAT research closer to, the farmer's conditions and the program imperative of conducting research on his total environment.

PLANT SCIENCES

Sorghum and Millet

9 principal, 2 support

\$705,000

Advances in the cereal improvement program will require full staffing of principal scientists by the end of 1976. A geneticist will assist plant breeders to accelerate their program and aid in the search and development of disease resistance and pest tolerance. A germplasm specialist will match

the contributions made by his counterpart in pulses. A cereals pathologist will work closely with breeders and geneticists to develop resistance to downy mildew and other diseases.

The cereal physiologist is already on board and has begun studies on identification of characters of an efficient plant type for the harsh, rainfed conditions of the semi-arid tropics. Work on striga, shootfly and midge resistance began early in the breeding program and will be intensified next year. We fully recognize that a breakthrough in these cereals will require tapping all possible genetic sources of insect and disease resistance.

We also recognize the need for outside guidance. A group of international cereals scientists will participate in a "consulting workshop" in April to critically evaluate and review present efforts and make recommendations for future research.

Training is another area of program emphasis. With the training of Nigerian agricultural officers completed in 1974 and 1975, we expect the program to expand in 1976.

The 1976 off-station activities will be as dynamic as the field activities in Hyderabad; among them:

- * A summer crop raised at Coimbatore in South India will provide a needed environmental diversity.
- * Segregating material and promising lines will be sent to national programs for testing.
- * The UNDP-ICRISAT Cooperative West African Sorghum and Millet program will add an important link to our outreach effort.

PLANT SCIENCES

Chickpea and Pigeonpea	9 principal, 2 support	\$659,000
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It has not been possible to complete the entire interdisciplinary team in pulse improvement. But the international specialists who join in

1976 to fill the remaining posts will encounter a broad research base.

These projects are in progress:

- * Collection, cataloging, maintenance, conservation and distribution of thousands of germplasm lines; expeditions into remote areas of the semi-arid tropics will be underway.
- * Physiology studies on plant type, wilt resistance and other pragmatic questions for which the breeders must have rapid answers. Vital basic research is being conducted almost without precedence to uncover the biological secrets limiting yield.
- * Specific, high priority studies on causes and cures for wilt involving extensive survey of pulse growing areas to identify symptom and etiology variation of the disease, new races of the pathogen and potential sources of resistance.
- * Entomological and microbiological studies -- too urgently needed to await the arrival of permanent staff members.
- * A fully-developed breeding program. With principals and associate scientists on board, the program involves hundreds of crosses; off-season nurseries (including one at 10,000 feet in the Himalayas where scientists have been taken by helicopter); and cooperative research in the most important chickpea producing areas of North India.

Both crops are largely self-pollinated which means workers must be trained in the skillful art of manipulating minute floral parts.

The patterns of consumption dictate that consumer preferences and cooking qualities must be taken into account in both breeding programs.

In addition, these crops have received only a fraction of the research attention which has been focused on other major food sources.

In 1976 we must intensify efforts to answer primary questions about symbiotic nitrogen fixation, phosphorus utilization, disease resistance and a host of other factors needed to develop the low-input technology required by the farmers of the semi-arid tropics.

PLANT SCIENCES

Groundnut

4 principal

\$300,000

A modest beginning on groundnut research began in 1975. A contract was signed with North Carolina State University to assist ICRISAT with assembly of genetic resources and preliminary program development. In 1976, the breeding program will be underway with two generations per year grown at Hyderabad. Disease resistance will be an immediate program area of emphasis.

AGRICULTURAL ECONOMICS

2 principal, 1 support

\$161,000

ICRISAT economists have initiated studies on marketing, consumer preferences and price fluctuations in important crops of interest to the Institute. Six villages have been selected for intensive study in Sholapur, Akola and Mahboobnagar districts. Rainfall, soils, crops, demographic data and many other criteria were used in selecting the sites.

A principal aim of these studies is to increase understanding of traditional cultivation practices and resource availability in the semi-arid tropics and transfer this knowledge to ICRISAT crop improvement and farming systems research. This will assist in development of a problem-solving orientation for our research programs and help us maintain realistic priorities.

The data generated will serve the economists in their program goal of ultimately influencing agricultural policy to remove constraints to adoption. Similarly, historical analyses of human nutritional status; effect of risk and uncertainty on farmer behaviour; economic comparison of human, animal and mechanical power sources; evaluation of storage and use of runoff; and prospective technological innovations for the semi-arid tropics will have immediate impact on ICRISAT research as well as more general policy implications for regional and national development schemes.

Present studies are confined to India, but they will be extended to other countries in a systematic manner. The 1976 intensification of these and other studies will maintain the common goal: to make sure ICRISAT research is down-to-earth and the technology generated will offer a viable alternative to the farmers of the semi-arid tropics.

BIOCHEMISTRY, FOOD TECHNOLOGY
AND NUTRITION LABORATORY

1 principal

\$103,000

The goal of improved nutrition for the people of the semi-arid tropics lies behind a great many of ICRISAT's activities. It is a central objective of our mandate and will ultimately measure our success.

The Biochemistry, Food Technology and Nutrition Laboratory is already making a substantial contribution to the quality improvement of the ICRISAT crops and providing services required by plant breeders, physiologists, agronomists and other specialists.

With the principal scientist on board, the laboratory has analysed thousands of samples by rapid and complex screening methods for total protein, lysine, methionine, cystine, moisture and fat. By 1976, studies of starch and other nutrients will be included.

Cooking quality is a major concern of the people who rely on these crops for their food staples. A contract has been signed with the Andhra Pradesh Agricultural University's Home Science College to provide a detailed appraisal of this characteristic on a continuing basis.

IV. TRAINING AND CONFERENCES

TRAINING AND FELLOWSHIPS	1 principal	\$218,000
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Four Nigerian agricultural officers completed training at ICRISAT on November 13, 1974. They returned to the semi-arid region in the northern part of their country to take responsibility for an accelerated program of sorghum and millet production. This year the program has doubled. The principal scientist is joining April 1.

Considerable expansion is planned in 1976. Since the needs will far outweigh our initial ability to develop the required facilities and high quality programs in the first years of operation, candidates will continue to be selected on an area priority basis.

CONFERENCES AND SYMPOSIA	\$140,000
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ICRISAT has already received guidance from eminent scientists assembled at workshops on farming systems and grain legumes. A third "consulting" workshop is planned in April to make a detailed examination of our sorghum improvement program.

Three four-day workshops will be organized in 1976. One on tropical soils will be in cooperation with USAID and FAO. Travel expenses and per diem will be authorized for approximately 20 foreign and 10 local participants at each conference. No honorarium will be paid.

V. SUPPORT OPERATIONS

LIBRARY-DOCUMENTATION Principal-0, 1 support \$120,000

The ICRISAT library now has approximately 2,500 reference volumes, over 1,000 bound volumes of periodicals and is subscribing to 350 journals. Through reciprocal arrangements with local science libraries, the ICRISAT unit is keeping abreast with current internal needs.

However, the micro-film program is just beginning. By 1976, ICRISAT will have a significant research support commitment to other areas of the semi-arid tropics. Expansion of the microfilming, photocopying and related services will receive increasing emphasis.

INFORMATION SERVICES 2 principal, 2 support \$183,000

By 1976 Information Services will be fully staffed with all editorial, art, photography, printshop and visitor service personnel on board. Equipping these units with modern machinery and specialized supplies will be completed in 1975.

The 1976 budget requirement reflects the operational and supply costs associated with production of the ICRISAT newsletter, annual report, workshop proceedings and special publications. The unit will also continue special services -- hosting visitors, research photography, production of research graphics, etc. -- and branch out into additional non-print media channels.

COMMON LAB SERVICES 1 principal, 1 support \$ 75,000

A large number of soil and plant samples have been analysed for various constituents in recent months. This work represents the beginning of a service which will form the foundation of field experiments by physiologists, pathologists, entomologists, agronomists, breeders and other specialists.

Flexibility is the key to successfully meeting analytical needs ranging from interpreting of nutrient uptake to evaluation of crop residues for nutritive value for animals. A well-equipped common laboratory, staffed by diversified technicians is the most efficient means of achieving that flexibility.

FARM SERVICES	1 principal, 2 support	\$423,000
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ICRISAT recognizes a special debt to this dynamic unit. Farm development: leveling precision fields; digging drains; and constructing tanks, culverts, and roads has gone on at a frantic pace. Routine farm operations: tillage, seedbed preparation, sowing, cultivating, irrigation, plant protection, harvesting, threshing, etc., have been accomplished with a skill and speed to match the needs of research. In addition, workshop operations are in increasing demand from all units.

In recent months Farm Services has been assigned the responsibility for all of the earth-moving tasks associated with construction of our permanent buildings and the cost thereof is being charged to the capital budget. It is anticipated that this cost will reach a peak level in 1975 and taper down in 1976 and 1977.

The equipment and personnel demands to continue these tasks and farm services over the next few years are significant. A large part of the 1976 budget increase is due to higher prices of equipment and fuel plus higher labour costs.

TRANSPORTATION - MOTOR POOL	\$ 74,000
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ICRISAT has made continual efforts to keep transport costs down: vehicles have been re-assigned to individual units for obtaining the maximum

combination of use; international staff members do their own driving; and vehicle servicing and preventive maintenance is given a high priority.

In spite of these efforts, temporary facilities scattered over large distances, rising fuel costs, increases in staffing, a doubling of visitors and necessary supply transport have contributed to the overall operational costs which will continue to rise as we enter the 1976 budget period.

STATISTICS AND COMPUTER SERVICES	1 principal, 2 support	\$102,000
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Installation of a computer is essential to meet the Institute's research requirements for statistical data storage and processing. Recommendations by Ross and Associates were modified by Computer Consultant Dr. Jerry Warren. After making a thorough analysis of ICRISAT's total computer needs, including administrative requirements, Dr. Warren recommends installation of a time-sharing system (Hewlett Packard (HP) 2000F or a Digital Equipment Co. (DEC) PDP 11/45).

By 1976, a computer chief and statistician will be on board with supporting staff. These complementary services will assist scientists from the early stages of formulating experimental design to the final stages of data processing.

VI. GENERAL ADMINISTRATION

GOVERNING BOARD	\$ 65,000
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The Governing Board will meet once as a full body in Hyderabad in 1976. Three meetings of the Executive Committee are planned.

ADMINISTRATION	4 principal, 2 support	\$464,000
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The Associate Director has joined to head our outreach program. Purchasing, accounting and stores activities will increase due to undertaking a considerable amount of the construction work departmentally. Additional office staff will be required to provide needed support to expanding departments and programs.

PHYSICAL PLANT SERVICES	1 principal	\$ 69,000
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As ICRISAT's research programs add staff to round out their interdisciplinary teams, the need for field offices, laboratory space and city-based offices increases. A number of farm houses in Manmole village have been renovated for temporary use. Maintenance of these facilities plus rented buildings in the city demands skilled personnel and costly materials.

Physical Plant Services will continue to have major responsibility for supervising construction of the permanent buildings. This will require increased resources during the construction period.

VII. GENERAL OPERATIONS

COMMUNICATIONS		\$ 60,000
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As research and support units reach full staffing and activity levels, their need to extend and receive information rises accordingly. Postage, cable and telex rates have increased adding costs beyond those expected from greater use. Temporary locations of staff at five locations in Hyderabad and four at Patancheru has increased the telephone requirements.

OFFICE OCCUPANCY \$141,000

An increase in this category is due to the addition of office space for new staff members. Renovation and furnishing has been done according to a compromise level between minimal requirements for efficient operation and changes commensurate with temporary occupancy.

STAFF HOUSING \$ 31,000

The housing allowance arrangement has continued to be almost self-supporting. Only a small increase is required in 1976.

INSURANCE \$ 10,000

No change is anticipated for general insurance costs in 1976.

GENERAL SUPPLIES \$ 75,000

Increasing prices and an increase in staff are expected to double expenditures for stationery and office supplies.

Total for General Operations: \$317,000

VIII. CAPITAL DEVELOPMENT PROGRAM

The architects' plans for the construction of a physical plant on an 80 acre site within the ICRISAT's 3500 acre farm, after review by the Board, modification by USAID and approval by CGIAR are now being implemented. The tenders which were called in June 1974 and opened on 29th July, 1974 were found unacceptably high and had to be rejected except for air conditioning which were reasonable and needed only slight modification. The global price

rise, combined with uncertainty of situations, shortages of materials, quality standards of buildings expected and other factors, resulted in few bidders and abnormally high bids initially. The Executive Committee of the Governing Board recommended retendering for civil, electrical and plumbing works for which the tenders were earlier found unacceptable. The whole construction job was divided into a group of units so as to enable a larger number of contractors with good experience and sound resources to compete. Lists of suitable contractors were drawn with the help of a special advisory panel of architects and engineers approved by the Board, and Doshi and Stein, the architects of ICRISAT. The second time tenders were invited for the separate units on 28th October, 1974 and bids were opened on 11th and 12th December, 1974. The second time there was a keener competition amongst the contractors and the bids were at least 20-25 percent less as compared to the first time tenders were called. Still the total cost of the project as planned by the architect was much higher than 17.35 million US dollars which was the ceiling imposed by the CGIAR in the meeting during April 1974. (Operational 15.65 + Capital 17.35 = Total: 33 mdollars). To manage within the ceiling, a number of items had to be deferred for later attention. Even one major laboratory wing was postponed. For the whole construction work, priorities have been fixed by the Board which enable the Institute to proceed with the construction of buildings within the established budget ceiling and postpone construction of buildings which will be required latest in the schedule of staff and program development. It may be mentioned that in spite of the fact that every reasonable effort has been made to achieve economy through modification of specifications and broadening the base of tendering and increasing competition, yet the worldwide inflation, high costs of construction materials and equipment, and rising labour costs made it impossible

to provide for the entire building program within the ceiling established by the CGIAR in April 1974. The Institute's management and the Governing Board are unanimous in their view that all the items in the proposed building program are essential and need to be provided for as soon as the funds become available. However, in the Capital budget breakup shown below it does not cover all the items in the original plan:

1974	-	3.0 million U.S. dollars
1975	-	6.5 "
1976	-	5.5 "
1977	-	2.35 "

For the deferred items of high priority and for satisfactorily completing the entire projected building program, an additional capital budget of approximately 3.5 million US dollars may be needed.

INTERNATIONAL COOPERATIVE PROJECTS
(Non-core activities)

1. West African Cooperative Project.

In 1975 budget document the projections of the proposed international cooperative projects, which will be outside the core activities of ICRISAT were presented. Out of these the project for West Africa Sahelian Sudanian region for cooperative program of research and training for the improvement of sorghum and millets in West Africa has been signed by the UNDP in January 1975 under the title "ICRISAT West African Cooperative Program for the Improvement of Sorghum and Millet". Under this project ICRISAT proposes to cooperate with and assist in strengthening the West African research and agricultural production programs for development of improved varieties of sorghum and millet and for defining the production practices and techniques and systems of farming and land and water management which will ensure constant and reliable yields of these crops and improvement in their food quality. It aims at strengthening the national programs and collaborating with them in Samaru (Nigeria), Bambey (Senegal), Farako-Ba near Bobo-Dioulasso (Upper Volta) and a suitable center in Niger.

The program will generate location specific technology by working in close collaboration with ICRISAT, Hyderabad, but conducting researches in West African research centers mentioned above, with the help of teams of scientists. Distribution of seed and conducting trials with the promising lines in different ecological environments will be another important activity of the project. The entries for the series of uniform trials required throughout the region will be decided by consultation between these cooperating centers and various national

agencies. For conducting these trials in Senegal, Gambia, Mauritania, Mali, Togo, Dahomey, Ghana, Upper Volta, Nigeria, Niger, Chad and Cameroons, funds are being provided by or are being sought from different agencies such as Governments of USA, UK, Canada, France and Netherlands. The trial officers which were provided under various bilateral arrangements will work in collaboration with this project, linking themselves with other four research stations which have been selected for serving the region.

Training is another important activity on which depends the success of the project. Training of the trainees will be done at ICRISAT (Hyderabad) while most of the local trainees from the national projects will be trained at Samaru and Bambey where teams of specialists will work.

The program has been launched. The Associate Director for Cooperative Research has been appointed and he will be joining by September 1975. Plant Breeder-cum-Agronomist for Upper Volta center has been appointed and he is undergoing training in French language so as to equip him better for conducting his work. Discussions with the local authorities in Samaru (Nigeria) and Bambey (Senegal) have been held and steps have been taken to identify and appoint the staff at these centers. Promising material of sorghum and millet is being supplied to all these research stations for initiating the active research program. During 1976 the work will be accelerated.

Several agencies including USAID, the ODA/UK, IDRC, the French Government/IRAT/ORSTOM and the European Community are already contributing substantially in the regions to support activities closely related to the objectives of this project. Discussions with these agencies and organizations have been started to strengthen the links and ensure smooth working relations. In view of the fact that USAID/USDA support to Project 26 on major cereals in West Africa will

be available till 1976, the provision for 1975 for station at Samaru is small. The details of the budget for UNDP West African project are given in Tables I and II.

TABLE I

Estimated costs, three year budget 1975-1977 inclusive
for African Cooperative Programme of ICRISAT for the
Improvement of Sorghum and Millet in Africa

	<u>1975</u> \$	<u>1976</u> \$	<u>1977</u> \$	<u>Total</u> \$
A. General Direction and Supervision	50,000	75,000	90,000	215,000
B. Recurrent expenses, by country: (Operational Budget)				
Senegal	200,000	440,000	526,000	1,166,000
Upper Volta	50,000	75,000	90,000	215,000
Nigeria (UNDP portion)	70,000	200,000	200,000	470,000
Niger	50,000	75,000	90,000	215,000
C. Vehicles and initial equipment (Capital cost):				
General Direction	5,000	-	-	5,000
Senegal	89,000	-	-	89,000
Upper Volta	10,000	-	-	10,000
Nigeria	30,000	-	-	30,000
Niger	10,000	-	-	10,000
D. Capital, Upper Volta for Laboratories and working space	70,000	-	-	70,000
TOTAL:	634,000	865,000	996,000	2,495,000

The contribution of \$160,000 from Nigeria for 1975 will be used for capital expenses at Samaru in support of the cooperative program.

TABLE II
(Manpower)
PRINCIPAL STAFF

	<u>1975</u>	<u>1976</u>	<u>1977</u>
General Direction	1	1	1
Bambey	2	4	5
Samaru	1	2	2
Upper Volta	1	1	1
Niger	1	1	1
	<hr/> 6	<hr/> 9	<hr/> 10

2. International Cooperative Projects in East Africa

Project proposal for East Africa was submitted last year. Tentatively it is proposed that the project headquarters would be located at the College of Agriculture, University of Dar-es-Salaam, Morogoro, Tanzania. The exact relationship with the Government of Tanzania and East African Community still requires to be worked out.

Its major purpose would be to develop varieties and methods of culture for sorghum, millet and pigeonpea which would have improved yields, quality and dependability of harvest for Tanzania and other areas of East Africa. Particular attention will be paid to varieties of short to medium duration, short to medium height, good grain quality drought tolerance and resistance to important pests and diseases of the area including striga, birds, shootfly and stem borer. Stress would be placed on testing under variety of

ecological conditions encountered in the region and working in collaboration with local scientists. The project is still at negotiation stage but in the meantime, ICRISAT scientists have started sending promising seed material to the cereal breeders in these countries for trials. Informal links have been established.

3. Ethiopia

In 1975 budget proposal it was indicated that the cooperative project for Ethiopia has been proposed. The project headquarters would be located at the College of Agriculture, Haile Selassie I University, Alemaya, whose responsibility has been centered for the national program of sorghum improvement. The project is visualized by ICRISAT as an extension of the current IDRC project or complementary to it in Ethiopia. Two other projects with headquarters at Debre Zeit and Kobbo were also contemplated. Due to disturbed conditions it has not been possible to make further progress with the organization of this program.

4. Thailand

5. North East Brazil

Although ICRISAT scientists have visited these areas and established contact, it is too early to formalize any project. From Thailand the sorghum workers were invited to ICRISAT and promising seed material has been supplied to them for trials.

For North East Brazil, ICRISAT economist is visiting as a member of a team to help EMBRAPA in planning a program.

6. India

Informal cooperative programs are being established with the All India Coordinated Programs in sorghum, millet, pulses and dryland agriculture. The promising seed material is being made available to Indian scientists and the real workers in various research projects are being provided opportunities to visit ICRISAT and select suitable materials for strengthening and accelerating their programs. The Agricultural Universities of Andhra Pradesh and Maharashtra are cooperating in village studies initiated in 1975.

7. Other Organizations

ICRISAT recognizes a great backup resource in the scientific laboratories and institutions in the more highly developed nations. These will be cultivated and developed as they are identified and mutual interests and opportunities can be matched. Several have already been identified. Among those of particular interest are the sorghum protein quality program at Purdue University, the conversion and disease resistance programs with sorghum at Puerto Rico and Texas, the program on physiology of stress at the University of Nebraska, the drought stress program at Saskatoon, the projects on stimulants to germination of striga and orobanche at Sussex and the Weed Research Organization of the U.K., programs on water relations and on legume improvement at Cambridge, the root development studies at Letcombe Laboratories, U.K., and many others. Generally, the major financing of these projects will come from sources outside ICRISAT, but their results will be of considerable importance to ICRISAT's program. Through joint collaboration, the relevance of such projects to the

semi-arid tropics can be sharpened, facilities and scientific talent of such institutions can complement those of ICRISAT and relieve it of certain segments of work; ICRISAT can in turn provide needed facilities and environments for study of the field aspects of the problems under investigation. Other international institutes have already made considerable progress in developing this type of cooperation, and ICRISAT regards it as an important avenue in development.

March 31, 1975

jg

ICRISAT - HYDERABAD
1976 Core Budget
SUMMARY OF COSTS BY PROGRAM AND ACTIVITY -1972-1979

(U.S. \$ 000)

TABLE I

	Actual			Budget 1975		Estimated Budget	Projected		
	1972	1973	1974	Original	Current Estimate	1976	1977	1978	1979
<u>Major Activities:</u>									
1. <u>Research</u>									
Farming Systems		120.2	161	321	332	436	510	520	550
Plant Sciences:									
Sorghum and Millet		302.2	826	513	518	705	830	850	930
Chickpea and Pigeonpea		3.8	337	467	486	659	752	800	900
Groundnut				-	175	300	500	600	600
Agricultural Economics		0.4	76	145	145	161	164	170	180
Biochemistry, -Food Tech. Nutrition		-	16	88	85	103	111	120	130
TOTAL:		426.60	1,416	1,534	1,741	2,364	2,867	3,060	3,290
2. <u>Training and Conferences</u>									
Training and Fellowship		-	3	216	152	218	290	350	400
Conferences and Symposia		-	30	77	100	140	140	150	200
TOTAL:		-	33	293	252	358	430	500	600

TABLE I (Cont'd)

	Actual			Budget 1975		Estimated Budget	Projected		
	1972	1973	1974	Original	Current Estimate	1976	1977	1978	1979
3. Support Operations									
a) Service Activities:									
Library - Documentation		20.1	24	75	75	120	154	160	180
Information Services		-	78	107	136	183	186	200	250
Common Lab Services		-	21	51	33	75	101	110	150
Farm Services		171	293	307	390	423	493	500	550
Transportation - Motor Pool		69.9	148	100	97	74	70	130	150
Statistics		-	-	60	60	102	110	120	150
TOTAL:		261	564	700	791	977	1,114	1,220	1,430
b) General Administration:									
Board of Trustees		40.7	41	75	75	65	70	75	80
Administration		267.6	*309	440	342	464	500	500	550
Physical Plant Services		-	-	160	55	69	150	200	300
TOTAL:		308.3	350	675	472	598	720	775	930

*Includes Physical Plant Services

TABLE I (Cont'd)

	Actual			Budget 1975		Estimated	Projected		
	1972	1973	1974	Original	Current Estimate	Budget 1976	1977	1978	1979
4. General Operations									
Communications		19.2	54	55	55	60	65	75	80
Office Occupancy		51.6	229*	60	221	141	113	150	30
Staff Housing (initial expenses)		27.2	53	5	45	31	31	25	-
General Insurance		0.2	4	15	10	10	15	15	15
General Supplies		45.5	113	30	100	75	75	75	80
TOTAL:		143.7	453	165	431	317	299	340	205
5. All Other									
Contingency, including provision for future price changes:				383	238	686	470	405	545
TOTAL CORE:	184.3	1,139.60	2,816	3,750	3,925**	5,300	5,900	6,300	7,000

*Includes costs associated with rehabilitation of villages moved from Institute land.

**Includes groundnut program budget of \$175,000

1976 BUDGET
ICRISAT - HYDERABAD
SUMMARY OF SOURCES AND APPLICATION OF FUNDS
(US \$ Thousands)

TABLE II

	Actual		Estimate	Budget
	1973	1974	1975	1976
<u>SOURCES OF FUNDS</u>				
1. Core and Capital				
a. Unrestricted				
(1) Canada	-	1,847.9	800.0	
(2) Norway	182.6	444.7	730.0	
(3) Sweden	-	1,175.3	1,300.0	
(4) Switzerland (Note A)	280.0	-	230.0	
(5) United Kingdom	233.0	408.4	535.0	
(6) USAID (Partial - remainder allocated to excess property)	517.7	885.9	1,947.4	
(7) Federal Republic of Germany	458.9	694.1	440.0	
(8) Australia	-	-	422.3	
(9) Belgium	-	-	25.0	
(10) Netherlands	-	-	175.0	
(11) United Nations Environment Programme	-	-	120.0	
(12) International Development Authority	-	-	- *	
Total Donors	1,672.2	5,456.3	6,724.7	
Earned Income	164.2	1,008.1	200.0	
Capital				
USAID Excess Property - 1974	227.3	114.1	112.6	
Federal Republic of Germany (For Electric Generators, Refrigeration System)	-	-	260.4	
Unexpended Balances (Note - B)	1,235.9	1,292.5	4,814.9	
	3,299.6	7,871.0	12,112.6	
b. Restricted				
(1) UNDP	507.7	583.1	848.0	893.0
(2) IDRC	231.0	-	350.0	
Total Donors	738.7	583.1	1,198.0	
Unexpended Balances (Deficit)	-	432.6	(147.7)	
Total Restricted	738.7	1,015.7	1,050.3	
c. Special Projects				
Nigeria	-	-	160.0	
Thailand	-	-	10.0	
West Africa - UNDP	-	-	634.0	
Total - Special Project Grant	-	-	804.0	
d. Gross Core and Capital Funds Required	4,038.3	8,886.7	13,966.9	
Less Unexpended Core and Capital Balances	(1,235.9)	(1,292.5)	(4,814.9)	
Less Earned Income	(164.2)	(1,008.1)**	(200.0)***	
e. Net Funds required from CG	2,638.2	6,586.1	8,952.0	
	=====	=====	=====	

TABLE II (Cont'd)

	Actual		Estimate	Budget
	1973	1974	1975	1976
<u>APPLICATION OF FUNDS</u>				
1. Core Operations	1,139.6	2,816.2	3,925.0	4,800.0
2. Special Projects	-	-	804.0	
3. Capital				
Capital Expenditure	1,570.3	1,403.3	6,500.0	5,500.0
Working Capital	-	-	-	-
Total Capital	1,570.3	1,403.3	6,500.0	5,500.0
=====				
4. Unexpended Balances- (Deficit)				
Unrestricted-Core, Capital and	895.8	4,814.9	2,667.6	
Retained Income				
Restricted	432.6	(147.7)	70.3	
Total-Unexpended Balances	1,328.4	4,667.2	2,737.9	
=====				
5. Total Applications	4,038.3	8,886.7	13,966.9	10,300.0
=====				

(A) Contributions of \$ 150.0 from Government of Switzerland for the year 1974 received during December, 1973 were reflected in 1973 accounts.

(B) Includes \$ 396.7 transferred from Fully Expended Capital Grants as at December 31, 1973 in respect of Steel Stocks, advances for Steel and accruals for unexecuted purchase orders for Steel transferred during 1974 to the respective inventory/advance account.

* Amount not yet indicated. \$1,000,000 tentatively estimated in communication from CGIAR dated April 30, 1974.

** Includes interest earned on short term investments, net gain in exchange fluctuations, refunds on excise duty paid, farm sales, miscellaneous income and, as suggested in CGIAR document of February 12, 1975, the share of indirect costs on restricted projects. This latter item represents a book transfer within the institute which has the effect of simultaneously inflating the figures for both income and expenditure artificially. We believe this item should be treated in a different manner.

*** Includes only anticipated sale of farm produce and interest on short term investments.

1976 BUDGET
ICRISAT - HYDERABAD

TABLE III

SUMMARY FINANCIAL DATA 1973-1976
(U.S. \$ 000)

	1973	Actual 1974	Estimates 1975	Projection 1976
<u>CURRENT ASSETS:</u>				
Cash	138.0	426.4	500.0	
Short Term Investment	1,047.9	3,984.6	-	
Receivables from Donors	731.2	66.3	500.0	
Other Receivables	90.0	423.2	1,000.0	
Inventories	5.1	832.1	1,000.0	
Prepaid Expenses	-	12.7	20.0	
Other Current Assets - Accrued Interest	3.5	19.7	-	
Total Current Assets	2,015.7	5,765.0	3,020.0	
<u>FIXED ASSETS:</u>				
Operating Equipment	42.9	174.0	313.8	
Research Equipment	333.4	752.6	1,235.7	
Vehicles	189.0	479.9	643.3	
Furnishings & Office Equipment	153.1	362.8	962.5	
Buildings	651.2	478.7	3,902.4	
Other Fixed Assets - Site Development and Campus External Work	358.2	456.1	1,294.0	
Assets in Transit	-	30.3	30.3	
Contingency	-	-	852.4	
Total Fixed Assets	1,727.8	2,734.4	9,234.4	
Total Assets	3,743.5	8,499.4	12,254.4	

TABLE III(Contd)

	1973	Actual 1974	Estimates 1975	Projection 1976
<u>LIABILITIES:</u>				
Accounts Payable	401.6	253.7	407.1	
Grants Received in Advance	-	260.4	-	
Other Liabilities - Overdraft with First National City Bank, New York	285.6	583.7	-	
Total Liabilities	687.2	1,097.8	407.1	
<u>CAPITAL BALANCES & UNEXPENDED FUNDS:</u>				
Capital Grants:				
Fully Expended	1,727.8	2,734.4	9,234.4	
Unexpended	213.5	42.5	-	
Sub-Total	1,941.3	2,776.9	9,234.4	
<u>Unexpended Operating Grants:</u>				
Core and Capital	518.1	3,600.0	1,295.2	
Restricted Projects	432.6	(147.7)	70.3	
Sub-Total:	950.7	3,452.3	1,365.5	
Retained Income	164.3	1,172.4	1,247.4	
Total Capital Balances	3,056.3	7,401.6	11,847.3	
Total Liabilities and Capital	3,743.5	8,499.4	12,254.4	

EXPLANATIONS TO TABLE III
(U.S. \$ 000)Current Assets:

Cash & Bank Balances:

Petty Cash Funds	\$ 4.0	
National Grindlays Bank Limited, Hyderabad	<u>422.4</u>	<u>426.4</u>
Short term investment as on 31 December, 1973 the amount under investment and was not in the bank account		<u>3,984.6</u>
Receivables from Donors : From USAID		23.7
Excess Property Grant	114.1	
USAID - less property received	<u>71.5</u>	<u>42.6</u>
Total :		<u>66.3</u>
Other receivables:		
Staff Advance		38.6
Advance to Contractors, Suppliers		330.2
Receivables - Farm Produce Sales		3.3
Deposits		<u>51.1</u>
		<u>423.2</u>
Inventories:		
Value of Stockes in hand:		
Farm Supplies (Fertilizer etc.)		68.0
Building Materials (Steel, Wiremesh etc.)		<u>764.1</u>
		<u>832.1</u>
Prepaid Expenses (Expenses pertain to subsequent year)		12.7
Other assets - Accrued Interest on short - term investment and voluntary loan contribution to A.P.S.E.B.		19.7

EXPLANATIONS TO TABLE III(Contd)
(U.S. \$ 000)

Liabilities:

Account payable:

Accruals & Commitments		253.7
------------------------	--	-------

--	--	-------

Overdraft:

Book Balance with checks issued

		583.7
--	--	-------

--	--	-------

Capital Balances

Fully expended = Fixed Assets

Unexpended = Excess property
 receivable from
 USAID

Unexpended Operating Grants:

Core Capital

Opening Balance on 1-1-1974	518.1	
-----------------------------	-------	--

Adjustment in respect of Steel stock and advances of 1973	396.7	
--	-------	--

Grants received during year	5,456.3	6,371.1
-----------------------------	---------	---------

--	-------	--

Less (i) Core Expenditure

	2,816.1	
- 1,163.4 (Restricted	1,163.4	
expenses)	-----	
	1,652.7	

Less (ii) Capital Expenditure

	1,403.3	
- 284.9 USAID excess	284.9	
property received	-----	
	1,118.4	

Total Core & Capital

		2,771.1
--	--	---------

		3,600.0

G7

OUTGOING WIRE

TO: DR. RALPH W. CUMMINGS
DIRECTOR
CRISAT
SECUNDERABAD

DATE: APRIL 1, 1975

CLASS OF
SERVICE: ~~Telex No. 915-366~~ LT / RA

Ext. 3592

COUNTRY: INDIA

TEXT:
Cable No.: AM PLEASED TO INFORM YOU THAT DR. RALPH MELVILLE HAS BEEN NOMINATED
BY CONSULTATIVE GROUP AS MEMBER OF ICRISAT GOVERNING BOARD FOR SECOND
THREE YEAR TERM TO CONCLUDE IN APRIL 1978 REGARDS

LEJEUNE
EXECUTIVE SECRETARY
CGIAR

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME John K. Coulter

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

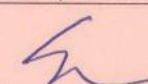
REFERENCE: MLejeune:apm

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

For Use By Communications Section

Checked for Dispatch: 

OUTGOING WIRE

PCA
G-7

TO: A. R. MELVILLE
MINISTRANT
LONDON

DATE: APRIL 1, 1975

CLASS OF
SERVICE: TELEX

Ext. 3592

COUNTRY: ENGLAND

TEXT:
Cable No.:

AM PLEASED TO INFORM YOU THAT YOU HAVE BEEN NOMINATED BY CONSULTATIVE
GROUP TO SERVE SECOND THREE YEAR TERM AS MEMBER OF ICRISAT GOVERNING BOARD
TO CONCLUDE IN APRIL 1978 REGARDS

LEJEUNE
EXECUTIVE SECRETARY
CGIAR

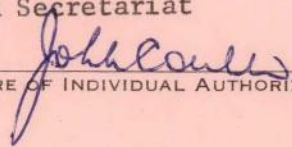
COMMUNICATIONS
APR 1 12 PM 1975

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME John K. Coulter

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)


REFERENCE:

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

DATE: APRIL 1, 1975

TO:

A. R. MELVILLE
MINISTRE
LONDON

CLASS OF

TELEX SERVICE

Ext. 3592

COUNTRY: ENGLAND

TEXT

Cable No.

AM PLEASED TO INFORM YOU THAT YOU HAVE BEEN NOMINATED BY CONSULTATIVE
GROUP TO SERVE SECOND THREE YEAR TERM AS MEMBER OF IERIST GOVERNING BOARD
TO CONCLUDE IN APRIL 1978. REGARDS

LEJUNE
EXECUTIVE SECRETARY
CGIAR

APR 1 7 15 PM 1975
COMMUNICATIONS

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NAME

CGIAR Secretariat

DEPT

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REFERENCE

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IMPORTANT: See Secretary's Guide for message form

Checked for Bureaucracy

For use by Communications Section

OUTGOING WIRE

TO: PROFESSOR C. F. BENTLEY
PROFESSOR OF SOIL SCIENCES
UNIVERSITY OF ALBERTA
EDMONTON
ALBERTA

DATE: APRIL 1, 1975

CLASS OF
SERVICE:

LTellex
Ext. 3592

COUNTRY: CANADA

TEXT:
Cable No.:

AM PLEASED TO INFORM YOU THAT DR. RALPH MELVILLE HAS BEEN NOMINATED
BY CONSULTATIVE GROUP AS MEMBER OF ICRISAT GOVERNING BOARD FOR SECOND THREE
YEAR TERM TO CONCLUDE IN APRIL 1978 REGARDS

LEJEUNE
EXECUTIVE SECRETARY
CGIAR

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME John K. Coulter

DEPT. CGIAR Secretariat

SIGNATURE *John Coulter*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: MLejeune:apm

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Checked for Dispatch:

INTERNATIONAL FINANCE
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

APRIL 1, 1978

DATE

CLASS OF
SERVICE

APR 1, 1978

PROFESSOR C. F. HENNING
UNIVERSITY OF ALBERTA
EDMONTON
ALBERTA

TO

COUNTRY: CANADA

TEXT

Cable No.

AM PLEASED TO INFORM YOU THAT DR. RALPH MELVILLE WAS RECOMMENDED
BY CONSULTATIVE GROUP AS MEMBER OF ICRISTAT GOVERNING BOARD FOR SECOND THREE
YEAR TERM TO CONCLUDE IN APRIL 1978. ENCLURE

ILLUSTRATION
EXECUTIVE SECRETARY
CGIAR

NOT TO BE TRANSMITTED

APR 1 10 53 AM 1978
TELETYPE AND COPY DISTRIBUTION

DISPATCHED

NAME: John E. Coulter

DEPT: CGIAR Secretariat

SIGNATURE: [Signature]
SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

REFERENCE: Bill's June 8 pgs

ORIGINAL (File Copy)

For Use By Communications Section

Checked for Dispatch

(Unauthorized use of this form is prohibited)



G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : 72091, 72628
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-366

CITY OFFICE:
1-11-256, Begumpet,
Hyderabad-500016, A. P., India

April 1, 1975

Mr. Michael Lejeune, Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. Lejeune,

I am enclosing herewith a draft copy of the ICRISAT Program and Budget proposals for 1976. We expect to continue working toward a refinement of these proposals and have scheduled a meeting of the Executive Committee of the Governing Board for May 22-24 to give them final shape.

In our proposal for 1975, we still plan to stay within the projected total of \$3,925,000 for the core operating budget (\$3,750,000 plus \$175,000 for groundnuts), even if the mounting costs should require us to go a little slower in staff and program development than we had planned. The estimates for 1976 and 1977 include our projected costs for the groundnut project and we have increased the budgets by \$500,000 and \$600,000 above our earlier estimates for the two years, respectively to partially compensate for the accelerated inflation in operating costs.

We shall welcome your comments and suggestions.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

Encls:

RWC:jg

ICRISAT - HYDERABAD
1976 - BUDGET
TABLE OF POSITIONS AND MANPOWER

TABLE: IV

ORGANIZATION UNIT	SENIOR PRINCIPAL STAFF										SENIOR SCIENTIFIC AND SUPERVISORY STAFF									
	POSITIONS					MANYEARS					POSITIONS					MANYEARS				
	Actual	Bud.	Cur.	Est.	Est.	Actual	Bud.	Cur.	Est.	Est.	Actual	Bud.	Cur.	Est.	Est.	Actual	Bud.	Cur.	Est.	Est.
	1973	1974	1975	1975		1973	1974	1975	1975		1973	1974	1975	1975		1973	1974	1975	1975	
I. Program Units:																				
Farming Systems	2	2	4	3	5	2	2	4	2.2	3.9	2	-	1	1	1	2	-	1	.5	1
Plant Sciences	1	9	15	12	18	.4	5.2	14.5	10.5	14.2	6	3	13	3	4	2	3	11	2.5	4
Ground Nut	-	-	-	3	4	-	-	-	1.5	3.5	-	-	-	-	-	-	-	-	-	-
Agriculture Economics	-	3	2	2	2	-	1.8	2	2	2	-	1	1	1	1	-	.4	1	1	1
Bio-Chemistry Food	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tech. and Nutrition	-	1	1	1	1	-	.2	1	1	1	1	-	1	-	-	.25	-	1	-	-
Training and Demonstration	-	-	1	1	1	-	-	1	.5	1	1	-	1	-	-	.5	-	1	-	-
Conference and Symposia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total:	3	15	23	22	31	2.4	9.2	22.5	17.7	25.6	10	4	17	5	6	4.75	3.4	15	4	6
II. Support Operations:																				
(a) Service Activities:																				
Library & Documentation	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	.25	1	1	1	1
Information Services	-	1	2	2	2	-	1	2	1.4	2	-	-	2	1	2	-	-	1.8	.8	2
Common Lab. Services	-	-	1	1	1	-	-	.5	.2	1	1	-	1	1	1	.25	-	1	.3	1
Farm Services	1	1	1	1	1	.5	1	1	.5	.5	1	3	3	2	2	.6	3	3	2	2
Transportation Motor Pool	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-
Statistics	-	-	-	1	1	-	-	-	.3	1	-	-	-	1	2	-	-	-	.3	1.5
Sub Total:	1	2	4	5	5	.5	2	3.5	2.4	4.5	3	4	8	6	8	1.1	4	7.8	4.4	7.5
(b) General Administration:																				
Board of Trustees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office of Director	3	3	5	4	4	2.3	2.8	5	3.3	4	3	2	3	2	2	2.25	2	3	2	2
Physical Plant Services	1	1	1	1	1	1	1	1	.5	.5	1	-	1	-	-	.25	-	1	-	-
Sub Total:	4	4	6	5	5	3.3	3.8	6	3.8	4.5	4	2	4	2	2	2.5	2	4	2	2
TOTAL:	8	21	33	32	41	6.2	15	32	23.9	34.6	17	10	29	13	16	8.35	9.4	26.8	10.4	15.5

ICRISAT - HYDERABAD
1976 - BUDGET
TABLE OF POSITIONS AND MANPOWER

TABLE: IV - CONT'D

ORGANIZATION UNIT	JR. TECHNICAL/ADMINISTRATIVE STAFF										OTHER SUPPORT STAFF									
	POSITIONS					MANYEARS					POSITIONS					MANYEARS				
	Actual		Bud.		Est.	Actual		Bud.		Est.	Actual		Bud.		Est.	Actual		Bud.		Est.
	1973	1974	1975	Cur.Est. 1975		1973	1974	1975	Cur.Est. 1975		1973	1974	1975	Cur.Est. 1975		1973	1974	1975	Cur.Est. 1975	
I. PROGRAM UNITS:																				
Farming Systems	10	12	20	23	33	10	11.2	19.2	14.7	29.2	16	9	18	16	23	16	9	16.2	11.4	20.5
Plant Sciences	29	43	85	77	98	9.8	30.2	79	68.8	90.9	48	19	44	62	88	15.8	12.3	41	57.9	79.3
Ground Nut	-	-	-	3	4	-	-	-	3	4	-	-	-	18	18	-	-	-	9	18
Agriculture Economics	-	8	10	16	16	-	4.1	10	12.6	16	-	1	7	3	3	-	.3	5	3	3
Bio-Chemistry Food																				
Tech. and Nutrition	5	5	7	7	11	1.3	3.8	7	6.5	10.7	8	1	2	3	3	2	.7	2	2	3
Training and Demonstration	5	-	5	2	3	2.5	-	5	1.5	2.5	8	-	1	4	4	4	-	1	2.5	4
Conference and Symposia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total:	49	68	127	128	165	23.6	49.3	120.2	107.1	153.3	80	30	72	106	139	37.8	22.3	65.2	85.8	127.8
II. Support Operations:																				
(a) Service Activities:																				
Library & Documentation	3	2	7	4	5	.8	1.8	6.2	3.7	4.5	6	3	3	4	10	1.5	1.5	3	3.5	9.8
Information Services	2	5	5	8	11	.5	3.3	4.5	7	11	2	-	7	6	10	.5	-	6	4.5	10
Common Lab. Services	3	-	7	6	9	.8	-	6.5	4	7.5	-	-	1	1	1	-	-	1	.7	1
Farm Services	3	8	9	12	17	2.5	3.9	9	10.8	17	-	70	58	78	93	-	20.7	58	70.7	90.5
Transportation Motor Pool	-	-	1	-	-	-	-	1	-	-	22	29	16	30	30	13.5	18.8	16	24	30
Statistics	-	-	1	2	3	-	-	1	1	2.5	-	-	-	1	3	-	-	-	1	3
Sub Total:	11	15	30	32	45	4.6	9.0	28.2	26.5	42.5	30	102	85	120	147	15.5	41.0	84	104.4	144.3
(b) General Administration:																				
Board of Trustees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office of Director	15	28	27	32	33	9.8	21	27	31.5	33	-	66	78	92	125	-	44.3	77.5	87.8	125
Physical Plant Services	4	6	22	9	9	3.8	4.1	20.5	3.5	5.5	40	8	6	13	13	38.3	3.8	5.5	6	10.5
Sub Total:	19	34	49	41	42	13.6	25.1	47.5	35	38.5	40	74	84	105	138	38.3	48.1	83	93.8	135.5
TOTAL:	79	117	206	203	252	41.8	83.4	195.9	168.6	234.3	150	206	241	331	424	91.6	111.4	232.2	284	407.6

1976
PROGRAM
AND
BUDGET PROPOSALS

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

1-11-256 BEGUMPET

HYDERABAD 500016, A.P., INDIA

I. THE MISSION OF ICRISAT

ICRISAT has four main objectives:

1. To serve as a world center to improve the genetic potential for grain yield and nutritional quality of sorghum, pearl millet, pigeonpea, chickpea and groundnuts.
2. To develop farming systems which will help to increase and stabilize agricultural production through better use of natural and human resources in the seasonally dry semi-arid tropics.
3. To identify socio-economic and other constraints to agricultural development in the semi-arid tropics and to evaluate alternative means of alleviating them through technological and institutional changes.
4. To assist national and regional research programs through cooperation and support and contributing further by sponsoring conferences, operating international training programs and assisting extension activities.

Behind those goals lies a recognition of uncertainty, of marginal conditions, and -- most of all -- of urgency. For the 500 million persons who live in the world's semi-arid tropics, uncertainty is part of daily existence. They depend upon rainfed agriculture for their livelihood. Unfortunately, the rains of the semi-arid tropics are erratic, not only from season to season, but within seasons and within relatively small areas. The farmers of these regions on four continents grow marginal crops on marginal soils. They have little capital to invest in costly inputs.

The past decade's advances in yields over the more favoured tracts of irrigated land have had little impact on agriculture in the semi-arid tropics. The urgency of ICRISAT's mission provided strong motivation for the handful of scientists who launched our 1972-73 Farming Systems research program. The 1973-74 season marked the beginning of an ambitious crop improvement program. This past year, our third year of operation, brought the needed addition of a comprehensive economics and statistics program and some of the physiologists, entomologists, pathologists and biochemists to round out the Institute's interdisciplinary program teams.

ICRISAT's development has been rapid. About one third of its 1394 hectare research station has undergone transformation from its traditional use to precision experimental fields and developed watersheds. Fencing, roads, culverts, ponds and drainage ways have been constructed. Temporary laboratories and offices have been established and construction work on permanent research facilities is underway.

But the staff are most concerned with the advancement of research and activities which directly relate to ICRISAT's four objectives. Although only about half of the projected international staff are on board, early accomplishments have laid the groundwork for future investigations and programs in several areas.

The Highlights

CROP IMPROVEMENT

Germplasm. Thousands of lines of the four crops - sorghum, millet, pigeonpea, and chickpea - including exotic types and wild relatives, have been gathered from all continents and put in the "germplasm banks". This

genetic wealth is already being exploited for all valuable characteristics. Further survey and collection trips are planned to enable systematic assembly of all genetic stock before valuable types are lost. A contract has been signed with North Carolina State University which will provide prompt accession of a comprehensive germplasm collection of groundnuts.

Breeding. Crossing work has progressed rapidly in all four crops. By planting three crop generations of sorghums and millets during the first two years of crop improvement operations, composite populations have been advanced rapidly.

New records have been established for the number of crosses made in the self-pollinating chickpea and pigeonpea crops both at Hyderabad headquarters and in off-season nurseries.

Related Studies. ICRISAT plant breeders are supported by physiologists, entomologists, pathologists and biochemists in their search for every conceivable genetic source of pest resistance, drought tolerance, grain quality and consumer-desired characteristics. The teams have already found some potential for making sure the farmer has these traits in the seed, so they won't have to be "purchased" after planting.

FARMING SYSTEMS

The farming systems program is about to enter its fourth year of studies. Specific studies on intercropping, relay cropping, ratooning, method of planting, fertilization, protective "life saving" monsoon irrigation with stored runoff water, root development and other agronomic aspects have already yielded important data and provided leads for future research.

Observations on resource management involving a monitoring of experimental features of improved farming systems on several natural black and red soil watershed have been made continuously for two years. Although the program is in its infancy, several important findings can be cited: a ridge and furrow system has been found to effectively manipulate runoff, reduce drainage problems and erosion and increase infiltration; a system of grassed waterways has been developed and proven to be an efficient means of carrying runoff with minimal erosion loss; experimental design of a small, comparatively deep pond resulted in minimising evaporation and seepage losses; and increasing water use efficiency. Comparisons of production from alternative cropping systems revealed a potential for increasing yields several fold over the present agricultural output in the semi-arid tropics. Rainfall use efficiency in 1973-74 studies was estimated to be 20% higher on improved experimental watersheds compared with traditional systems.

ECONOMICS AND STATISTICS

Hardly one year after beginning its work, the Economics and Statistics unit can list several valuable contributions to the crop improvement and farming systems programs. In an effort to assist in establishing guidelines for the plant breeders, ICRISAT economists have launched a series of market studies to determine consumer preferences in all four crops. A preliminary general study on human nutritional status in the semi-arid tropics based on secondary data has been carried out. This has strengthened the need for research on greater production of more calories and more protein of high nutritive value per unit area. The necessity of looking into problems of starch and other nutritional aspects of grain has also been revealed.

On the production side, economists are monitoring inputs and conducting cost/benefit studies, particularly on farming systems agronomic trials and watershed investigations. These studies will yield data which will help to establish guidelines for research priorities and experiment design.

The Economics and Statistics unit has also launched a series of independent studies related to ICRISAT's third objective. These are continuing studies with both immediate and long time goals. The most advanced of these studies are (1) compilation of statistical data on the various countries and regions of the semi-arid tropics; (2) a village-level study of traditional farming systems; and (3) a study of the water storage facilities in India. The immediate objective of these studies is to increase our understanding of existing practices; a necessary first step to conducting more detailed investigations on modern technology and the associated problems of constraints to adoption, influence of risk and government policy and economic and nutritional impact.

The urgency of achieving the Institute's research goals is matched by the urgency of establishing a research and extension communications network to reach the most remote farmer of the semi-arid tropics. We have moved rapidly on several fronts.

Visitors. ICRISAT hosted over one thousand official visitors from 37 different countries in its second year of operations. Last year, the number more than doubled, not counting casual "drop-in" visits from local and travelling agriculturists.

International Workshops. ICRISAT sponsored two international workshops in the 1974-75 research year. An International Workshop on Farming Systems was held November 18-21 and on Grain Legumes from January 13-15. The immediate benefit from review of both programs has been great and we expect the continuing two-way flow of information which will have a decided impact on the research for many years.

Training. Four Nigerian agricultural officers completed a seven-month pilot training program on November 16, 1974. In addition, several of ICRISAT's program units have conducted short-term training programs for Indian participants. These early experiences have helped to formulate some important training principles which can be put to use as we launch our official training program this year. The senior training officer joined duty in April and seven participants from Nigeria will arrive in May. Shorter term training programs for field investigators in village studies and for experiment station management staff of cooperating institutions have also been carried out.

Cooperating Centers. ICRISAT's first foreign-based staff member begins work at Farako-Ba station, Bobo-Dioulasso (Upper Volta) this year following intensive French language training in France. Arrangements are well advanced toward putting into effect a comprehensive cooperative network on sorghum and millet improvement in twelve countries of West Africa. With UNDP support cooperative research teams will be located in Samaru, Nigeria; Bambey and Louga, Senegal; and Niger, in addition to Upper Volta. Additional support is anticipated from other sources. We have given the West African/Sahel region highest priority, but have also laid the groundwork for programs in East Africa and Northeast Brazil. These links will be formalized as soon as possible.

THE 1976 PROGRAM AND BUDGET APPRAISALS

The highlights of our research and development activities as presented here in relation to our research goals only tells part of the ICRISAT story. A host of supporting personnel and activities have made these early results possible. In the following sections we have outlined a carefully planned program and budget which we feel will sustain the high productivity of our research programs plus the necessary supporting units. At the same time, the program and budget has been tailored to allow for the systematic growth of each unit to its optimal and programmed level.

II. THE 1976 BUDGET

ICRISAT will require 5,300,000 US dollars for its minimum core programs of research and training in 1976. This represents an increase of \$1,375,000 over the budget for 1975. Of the increase, \$907,000 are due to the fact that ICRISAT is still growing towards part of its originally planned level of staff and core activity. As the construction work has been delayed and by the end of 1976 we still may not have the physical plant facilities available therefore some of the staff which was scheduled to be in position by 1976 will now be postponed for one year more. Considerable rise in cost is due to escalation of prices and contingencies. Individual increases are as follows:

A) Addition of 9 principal scientists brings staffing to a certain level of completion	\$315,000
B) Supervisory, technical, support and labour personnel needs, expanded to sustain the planned research and outreach efforts, require additional inputs	342,000
C) Increased support for outreach efforts through training and conferences	106,000

D) Service needs associated with expanded programs and enlarged staff require increased support of all kinds - petrol, fertilizer, chemicals, electricity, travel, paper, supplies, etc.	\$144,000
E) Worldwide increases in prices require a contingency to absorb higher costs (allocating to individual activities is not feasible due to unequal inflationary pressures in the international market from which ICRISAT obtains material and services)	468,000
	----- \$1,375,000 -----

The remainder of the funds received by ICRISAT for 1976 as well as any funds which can be carried forward from 1975 will be applied to its capital development program, the construction of buildings and the acquisition of equipment. The worldwide price escalation and revised tenders which have now been approved indicate that even on minimum facilities 21.0 million dollars will be required out of which 3 million have already been spent by the end of 1974 and the remaining amount is required in 1975, 1976 and possibly in 1977. This is despite all the economy which could be made by going to tenders a second time, reducing the initially planned building program to a slight degree, modification of the plans and specifications and stocking of steel at control price during 1974. In order to complete its physical plant, ICRISAT will require at least 3.5 million dollars above the ceiling amounts established by the Consultative Group for capital and operating funds for the 1974-1977 period.

III. THE 1976 RESEARCH PROGRAM

<u>Activity</u>	<u>Staff</u>	<u>1976 Expenditures</u>
FARMING SYSTEMS	5 Principal	\$ 436,000

Over its three-years of operation the farming systems program has moved steadily towards a methodological goal: substituting human energy, bullock power, and hand-operated implements for tractors and associated farm machinery.

To some, this might appear to be reverse technology. To those acquainted with the labour-intensive, capital-scarce conditions of the semi-arid tropics it is advancement; an advancement towards a realistic technology which can be embraced by the 500 million people we serve. The program has made other advances in that direction:

- * The First International Workshop on Farming Systems held in November 1974 set new farm-oriented guidelines and added new dimensions to our philosophy of research.
- * New runoff storage ponds of varying size and description have been built by hand and bullock power.
- * Research efforts in hydrology and engineering have moved onto the red soils.
- * A comprehensive economics component has been introduced into our watershed and agronomic research.
- * Agronomic studies involving intercropping, "life-saving" irrigation using stored runoff water, nutrient mobility and root penetration plus many other research areas with direct bearing to on-the-farm practices were expanded.

Investigations in 1976 call for a continuation and intensification of previous work but these new research areas will also be explored: The hydrological relationship of small watersheds to their larger catchment areas must be probed more effectively; screening of crops -- in addition to the five under intensive study in the crop improvement program -- is fundamental to systems development; weeds which sap the precious nutrients and moisture from farmers' fields must be understood and controlled; a lack of scientifically-engineered implements is already a constraint to advancing research; and gross climatological plus microclimatic data are urgently required.

While interdisciplinary teams will probe these and other questions in 1976 at Hyderabad, they clearly recognize the need to develop research at bench mark locations elsewhere in the semi-arid tropics. The greater input of personnel and materials required for the 1976 program phase will continue to move the program in two directions simultaneously. It will demand the most competent scientists and sophisticated research equipment available. But these resources will be brought to bear on, and bring ICRISAT research closer to, the farmer's conditions and the program imperative of conducting research on his total environment.

PLANT SCIENCES

Sorghum and Millet	9 principal, 2 support	\$705,000
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Advances in the cereal improvement program will require full staffing of principal scientists by the end of 1976. A geneticist will assist plant breeders to accelerate their program and aid in the search and development of disease resistance and pest tolerance. A germplasm specialist will match

the contributions made by his counterpart in pulses. A cereals pathologist will work closely with breeders and geneticists to develop resistance to downy mildew and other diseases.

The cereal physiologist is already on board and has begun studies on identification of characters of an efficient plant type for the harsh, rainfed conditions of the semi-arid tropics. Work on striga, shootfly and midge resistance began early in the breeding program and will be intensified next year. We fully recognize that a breakthrough in these cereals will require tapping all possible genetic sources of insect and disease resistance.

We also recognize the need for outside guidance. A group of international cereals scientists will participate in a "consulting workshop" in April to critically evaluate and review present efforts and make recommendations for future research.

Training is another area of program emphasis. With the training of Nigerian agricultural officers completed in 1974 and 1975, we expect the program to expand in 1976.

The 1976 off-station activities will be as dynamic as the field activities in Hyderabad; among them:

- * A summer crop raised at Coimbatore in South India will provide a needed environmental diversity.
- * Segregating material and promising lines will be sent to national programs for testing.
- * The UNDP-ICRISAT Cooperative West African Sorghum and Millet program will add an important link to our outreach effort.

PLANT SCIENCES

Chickpea and Pigeonpea	9 principal, 2 support	\$659,000
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It has not been possible to complete the entire interdisciplinary team in pulse improvement. But the international specialists who join in

1976 to fill the remaining posts will encounter a broad research base.

These projects are in progress:

- * Collection, cataloging, maintenance, conservation and distribution of thousands of germplasm lines; expeditions into remote areas of the semi-arid tropics will be underway.
- * Physiology studies on plant type, wilt resistance and other pragmatic questions for which the breeders must have rapid answers. Vital basic research is being conducted almost without precedence to uncover the biological secrets limiting yield.
- * Specific, high priority studies on causes and cures for wilt involving extensive survey of pulse growing areas to identify symptom and etiology variation of the disease, new races of the pathogen and potential sources of resistance.
- * Entomological and microbiological studies -- too urgently needed to await the arrival of permanent staff members.
- * A fully-developed breeding program. With principals and associate scientists on board, the program involves hundreds of crosses; off-season nurseries (including one at 10,000 feet in the Himalayas where scientists have been taken by helicopter); and cooperative research in the most important chickpea producing areas of North India.

Both crops are largely self-pollinated which means workers must be trained in the skillful art of manipulating minute floral parts.

The patterns of consumption dictate that consumer preferences and cooking qualities must be taken into account in both breeding programs.

In addition, these crops have received only a fraction of the research attention which has been focused on other major food sources. In 1976 we must intensify efforts to answer primary questions about symbiotic nitrogen fixation, phosphorus utilization, disease resistance and a host of other factors needed to develop the low-input technology required by the farmers of the semi-arid tropics.

PLANT SCIENCES

Groundnut	4 principal	\$300,000
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A modest beginning on groundnut research began in 1975. A contract was signed with North Carolina State University to assist ICRISAT with assembly of genetic resources and preliminary program development. In 1976, the breeding program will be underway with two generations per year grown at Hyderabad. Disease resistance will be an immediate program area of emphasis.

AGRICULTURAL ECONOMICS	2 principal, 1 support	\$161,000
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ICRISAT economists have initiated studies on marketing, consumer preferences and price fluctuations in important crops of interest to the Institute. Six villages have been selected for intensive study in Sholapur, Akola and Mahboobnagar districts. Rainfall, soils, crops, demographic data and many other criteria were used in selecting the sites.

A principal aim of these studies is to increase understanding of traditional cultivation practices and resource availability in the semi-arid tropics and transfer this knowledge to ICRISAT crop improvement and farming systems research. This will assist in development of a problem-solving orientation for our research programs and help us maintain realistic priorities.

The data generated will serve the economists in their program goal of ultimately influencing agricultural policy to remove constraints to adoption. Similarly, historical analyses of human nutritional status; effect of risk and uncertainty on farmer behaviour; economic comparison of human, animal and mechanical power sources; evaluation of storage and use of runoff; and prospective technological innovations for the semi-arid tropics will have immediate impact on ICRISAT research as well as more general policy implications for regional and national development schemes.

Present studies are confined to India, but they will be extended to other countries in a systematic manner. The 1976 intensification of these and other studies will maintain the common goal: to make sure ICRISAT research is down-to-earth and the technology generated will offer a viable alternative to the farmers of the semi-arid tropics.

BIOCHEMISTRY, FOOD TECHNOLOGY
AND NUTRITION LABORATORY

1 principal

\$103,000

The goal of improved nutrition for the people of the semi-arid tropics lies behind a great many of ICRISAT's activities. It is a central objective of our mandate and will ultimately measure our success.

The Biochemistry, Food Technology and Nutrition Laboratory is already making a substantial contribution to the quality improvement of the ICRISAT crops and providing services required by plant breeders, physiologists, agronomists and other specialists.

With the principal scientist on board, the laboratory has analysed thousands of samples by rapid and complex screening methods for total protein, lysine, methionine, cystine, moisture and fat. By 1976, studies of starch and other nutrients will be included.

Cooking quality is a major concern of the people who rely on these crops for their food staples. A contract has been signed with the Andhra Pradesh Agricultural University's Home Science College to provide a detailed appraisal of this characteristic on a continuing basis.

IV. TRAINING AND CONFERENCES

TRAINING AND FELLOWSHIPS	1 principal	\$218,000
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Four Nigerian agricultural officers completed training at ICRISAT on November 13, 1974. They returned to the semi-arid region in the northern part of their country to take responsibility for an accelerated program of sorghum and millet production. This year the program has doubled. The principal scientist is joining April 1.

Considerable expansion is planned in 1976. Since the needs will far outweigh our initial ability to develop the required facilities and high quality programs in the first years of operation, candidates will continue to be selected on an area priority basis.

CONFERENCES AND SYMPOSIA		\$140,000
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ICRISAT has already received guidance from eminent scientists assembled at workshops on farming systems and grain legumes. A third "consulting" workshop is planned in April to make a detailed examination of our sorghum improvement program.

Three four-day workshops will be organized in 1976. One on tropical soils will be in cooperation with USAID and FAO. Travel expenses and per diem will be authorized for approximately 20 foreign and 10 local participants at each conference. No honorarium will be paid.

V. SUPPORT OPERATIONS

LIBRARY-DOCUMENTATION	Principal-0, 1 support	\$120,000
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The ICRISAT library now has approximately 2,500 reference volumes, over 1,000 bound volumes of periodicals and is subscribing to 350 journals. Through reciprocal arrangements with local science libraries, the ICRISAT unit is keeping abreast with current internal needs.

However, the micro-film program is just beginning. By 1976, ICRISAT will have a significant research support commitment to other areas of the semi-arid tropics. Expansion of the microfilming, photocopying and related services will receive increasing emphasis.

INFORMATION SERVICES	2 principal, 2 support	\$183,000
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By 1976 Information Services will be fully staffed with all editorial, art, photography, printshop and visitor service personnel on board. Equipping these units with modern machinery and specialized supplies will be completed in 1975.

The 1976 budget requirement reflects the operational and supply costs associated with production of the ICRISAT newsletter, annual report, workshop proceedings and special publications. The unit will also continue special services -- hosting visitors, research photography, production of research graphics, etc. -- and branch out into additional non-print media channels.

COMMON LAB SERVICES	1 principal, 1 support	\$ 75,000
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A large number of soil and plant samples have been analysed for various constituents in recent months. This work represents the beginning of a service which will form the foundation of field experiments by physiologists, pathologists, entomologists, agronomists, breeders and other specialists.

Flexibility is the key to successfully meeting analytical needs ranging from interpreting of nutrient uptake to evaluation of crop residues for nutritive value for animals. A well-equipped common laboratory, staffed by diversified technicians is the most efficient means of achieving that flexibility.

FARM SERVICES	1 principal, 2 support	\$423,000
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ICRISAT recognizes a special debt to this dynamic unit. Farm development: leveling precision fields; digging drains; and constructing tanks, culverts, and roads has gone on at a frantic pace. Routine farm operations: tillage, seedbed preparation, sowing, cultivating, irrigation, plant protection, harvesting, threshing, etc., have been accomplished with a skill and speed to match the needs of research. In addition, workshop operations are in increasing demand from all units.

In recent months Farm Services has been assigned the responsibility for all of the earth-moving tasks associated with construction of our permanent buildings and the cost thereof is being charged to the capital budget. It is anticipated that this cost will reach a peak level in 1975 and taper down in 1976 and 1977.

The equipment and personnel demands to continue these tasks and farm services over the next few years are significant. A large part of the 1976 budget increase is due to higher prices of equipment and fuel plus higher labour costs.

TRANSPORTATION - MOTOR POOL	\$ 74,000
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ICRISAT has made continual efforts to keep transport costs down: vehicles have been re-assigned to individual units for obtaining the maximum

combination of use; international staff members do their own driving; and vehicle servicing and preventive maintenance is given a high priority.

In spite of these efforts, temporary facilities scattered over large distances, rising fuel costs, increases in staffing, a doubling of visitors and necessary supply transport have contributed to the overall operational costs which will continue to rise as we enter the 1976 budget period.

STATISTICS AND COMPUTER SERVICES 1 principal, 2 support \$102,000

Installation of a computer is essential to meet the Institute's research requirements for statistical data storage and processing. Recommendations by Ross and Associates were modified by Computer Consultant Dr. Jerry Warren. After making a thorough analysis of ICRISAT's total computer needs, including administrative requirements, Dr. Warren recommends installation of a time-sharing system (Hewlett Packard (HP) 2000F or a Digital Equipment Co. (DEC) PDP 11/45).

By 1976, a computer chief and statistician will be on board with supporting staff. These complementary services will assist scientists from the early stages of formulating experimental design to the final stages of data processing.

VI. GENERAL ADMINISTRATION

GOVERNING BOARD \$ 65,000

The Governing Board will meet once as a full body in Hyderabad in 1976. Three meetings of the Executive Committee are planned.

ADMINISTRATION	4 principal, 2 support	\$464,000
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The Associate Director has joined to head our outreach program. Purchasing, accounting and stores activities will increase due to undertaking a considerable amount of the construction work departmentally. Additional office staff will be required to provide needed support to expanding departments and programs.

PHYSICAL PLANT SERVICES	1 principal	\$ 69,000
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As ICRISAT's research programs add staff to round out their interdisciplinary teams, the need for field offices, laboratory space and city-based offices increases. A number of farm houses in Manmole village have been renovated for temporary use. Maintenance of these facilities plus rented buildings in the city demands skilled personnel and costly materials.

Physical Plant Services will continue to have major responsibility for supervising construction of the permanent buildings. This will require increased resources during the construction period.

VII. GENERAL OPERATIONS

COMMUNICATIONS		\$ 60,000
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As research and support units reach full staffing and activity levels, their need to extend and receive information rises accordingly. Postage, cable and telex rates have increased adding costs beyond those expected from greater use. Temporary locations of staff at five locations in Hyderabad and four at Patancheru has increased the telephone requirements.

OFFICE OCCUPANCY \$141,000

An increase in this category is due to the addition of office space for new staff members. Renovation and furnishing has been done according to a compromise level between minimal requirements for efficient operation and changes commensurate with temporary occupancy.

STAFF HOUSING \$ 31,000

The housing allowance arrangement has continued to be almost self-supporting. Only a small increase is required in 1976.

INSURANCE \$ 10,000

No change is anticipated for general insurance costs in 1976.

GENERAL SUPPLIES \$ 75,000

Increasing prices and an increase in staff are expected to double expenditures for stationery and office supplies.

Total for General Operations: \$317,000

VIII. CAPITAL DEVELOPMENT PROGRAM

The architects' plans for the construction of a physical plant on an 80 acre site within the ICRISAT's 3500 acre farm, after review by the Board, modification by USAID and approval by CGIAR are now being implemented. The tenders which were called in June 1974 and opened on 29th July, 1974 were found unacceptably high and had to be rejected except for air conditioning which were reasonable and needed only slight modification. The global price

rise, combined with uncertainty of situations, shortages of materials, quality standards of buildings expected and other factors, resulted in few bidders and abnormally high bids initially. The Executive Committee of the Governing Board recommended retendering for civil, electrical and plumbing works for which the tenders were earlier found unacceptable. The whole construction job was divided into a group of units so as to enable a larger number of contractors with good experience and sound resources to compete. Lists of suitable contractors were drawn with the help of a special advisory panel of architects and engineers approved by the Board, and Doshi and Stein, the architects of ICRISAT. The second time tenders were invited for the separate units on 28th October, 1974 and bids were opened on 11th and 12th December, 1974. The second time there was a keener competition amongst the contractors and the bids were at least 20-25 percent less as compared to the first time tenders were called. Still the total cost of the project as planned by the architect was much higher than 17.35 million US dollars which was the ceiling imposed by the CGIAR in the meeting during April 1974. (Operational 15.65 + Capital 17.35 = Total: 33 m dollars). To manage within the ceiling, a number of items had to be deferred for later attention. Even one major laboratory wing was postponed. For the whole construction work, priorities have been fixed by the Board which enable the Institute to proceed with the construction of buildings within the established budget ceiling and postpone construction of buildings which will be required latest in the schedule of staff and program development. It may be mentioned that in spite of the fact that every reasonable effort has been made to achieve economy through modification of specifications and broadening the base of tendering and increasing competition, yet the worldwide inflation, high costs of construction materials and equipment, and rising labour costs made it impossible

to provide for the entire building program within the ceiling established by the CGIAR in April 1974. The Institute's management and the Governing Board are unanimous in their view that all the items in the proposed building program are essential and need to be provided for as soon as the funds become available. However, in the Capital budget breakup shown below it does not cover all the items in the original plan:

1974	-	3.0 million U.S. dollars
1975	-	6.5 "
1976	-	5.5 "
1977	-	2.35 "

For the deferred items of high priority and for satisfactorily completing the entire projected building program, an additional capital budget of approximately 3.5 million US dollars may be needed.

INTERNATIONAL COOPERATIVE PROJECTS
(Non-core activities)

1. West African Cooperative Project.

In 1975 budget document the projections of the proposed international cooperative projects, which will be outside the core activities of ICRISAT were presented. Out of these the project for West Africa Sahelian Sudanian region for cooperative program of research and training for the improvement of sorghum and millets in West Africa has been signed by the UNDP in January 1975 under the title "ICRISAT West African Cooperative Program for the Improvement of Sorghum and Millet". Under this project ICRISAT proposes to cooperate with and assist in strengthening the West African research and agricultural production programs for development of improved varieties of sorghum and millet and for defining the production practices and techniques and systems of farming and land and water management which will ensure constant and reliable yields of these crops and improvement in their food quality. It aims at strengthening the national programs and collaborating with them in Samaru (Nigeria), Bambey (Senegal), Farako-Ba near Bobo-Dioulasso (Upper Volta) and a suitable center in Niger.

The program will generate location specific technology by working in close collaboration with ICRISAT, Hyderabad, but conducting researches in West African research centers mentioned above, with the help of teams of scientists. Distribution of seed and conducting trials with the promising lines in different ecological environments will be another important activity of the project. The entries for the series of uniform trials required throughout the region will be decided by consultation between these cooperating centers and various national

agencies. For conducting these trials in Senegal, Gambia, Mauritania, Mali, Togo, Dahomey, Ghana, Upper Volta, Nigeria, Niger, Chad and Cameroons, funds are being provided by or are being sought from different agencies such as Governments of USA, UK, Canada, France and Netherlands. The trial officers which were provided under various bilateral arrangements will work in collaboration with this project, linking themselves with other four research stations which have been selected for serving the region.

Training is another important activity on which depends the success of the project. Training of the trainees will be done at ICRISAT (Hyderabad) while most of the local trainees from the national projects will be trained at Samaru and Bambey where teams of specialists will work.

The program has been launched. The Associate Director for Cooperative Research has been appointed and he will be joining by September 1975. Plant Breeder-cum-Agronomist for Upper Volta center has been appointed and he is undergoing training in French language so as to equip him better for conducting his work. Discussions with the local authorities in Samaru (Nigeria) and Bambey (Senegal) have been held and steps have been taken to identify and appoint the staff at these centers. Promising material of sorghum and millet is being supplied to all these research stations for initiating the active research program. During 1976 the work will be accelerated.

Several agencies including USAID, the ODA/UK, IDRC, the French Government/IRAT/ORSTOM and the European Community are already contributing substantially in the regions to support activities closely related to the objectives of this project. Discussions with these agencies and organizations have been started to strengthen the links and ensure smooth working relations. In view of the fact that USAID/USDA support to Project 26 on major cereals in West Africa will

be available till 1976, the provision for 1975 for station at Samaru is small. The details of the budget for UNDP West African project are given in Tables I and II.

TABLE I

Estimated costs, three year budget 1975-1977 inclusive
for African Cooperative Programme of ICRISAT for the
Improvement of Sorghum and Millet in Africa

	<u>1975</u> \$	<u>1976</u> \$	<u>1977</u> \$	<u>Total</u> \$
A. General Direction and Supervision	50,000	75,000	90,000	215,000
B. Recurrent expenses, by country: (Operational Budget)				
Senegal	200,000	440,000	526,000	1,166,000
Upper Volta	50,000	75,000	90,000	215,000
Nigeria (UNDP portion)	70,000	200,000	200,000	470,000
Niger	50,000	75,000	90,000	215,000
C. Vehicles and initial equipment (Capital cost):				
General Direction	5,000	-	-	5,000
Senegal	89,000	-	-	89,000
Upper Volta	10,000	-	-	10,000
Nigeria	30,000	-	-	30,000
Niger	10,000	-	-	10,000
D. Capital, Upper Volta for Laboratories and working space	70,000	-	-	70,000
TOTAL:	634,000	865,000	996,000	2,495,000

The contribution of \$160,000 from Nigeria for 1975 will be used for capital expenses at Samaru in support of the cooperative program.

TABLE II
(Manpower)
PRINCIPAL STAFF

	<u>1975</u>	<u>1976</u>	<u>1977</u>
General Direction	1	1	1
Bambey	2	4	5
Samaru	1	2	2
Upper Volta	1	1	1
Niger	1	1	1
	<hr/> 6	<hr/> 9	<hr/> 10

2. International Cooperative Projects in East Africa

Project proposal for East Africa was submitted last year. Tentatively it is proposed that the project headquarters would be located at the College of Agriculture, University of Dar-es-Salaam, Morogoro, Tanzania. The exact relationship with the Government of Tanzania and East African Community still requires to be worked out.

Its major purpose would be to develop varieties and methods of culture for sorghum, millet and pigeonpea which would have improved yields, quality and dependability of harvest for Tanzania and other areas of East Africa. Particular attention will be paid to varieties of short to medium duration, short to medium height, good grain quality drought tolerance and resistance to important pests and diseases of the area including striga, birds, shootfly and stem borer. Stress would be placed on testing under variety of

ecological conditions encountered in the region and working in collaboration with local scientists. The project is still at negotiation stage but in the meantime, ICRISAT scientists have started sending promising seed material to the cereal breeders in these countries for trials. Informal links have been established.

3. Ethiopia

In 1975 budget proposal it was indicated that the cooperative project for Ethiopia has been proposed. The project headquarters would be located at the College of Agriculture, Haile Selassie I University, Alemaya, whose responsibility has been centered for the national program of sorghum improvement. The project is visualized by ICRISAT as an extension of the current IDRC project or complementary to it in Ethiopia. Two other projects with headquarters at Debre Zeit and Kobbo were also contemplated. Due to disturbed conditions it has not been possible to make further progress with the organization of this program.

4. Thailand

5. North East Brazil

Although ICRISAT scientists have visited these areas and established contact, it is too early to formalize any project. From Thailand the sorghum workers were invited to ICRISAT and promising seed material has been supplied to them for trials.

For North East Brazil, ICRISAT economist is visiting as a member of a team to help EMBRAPA in planning a program.

6. India

Informal cooperative programs are being established with the All India Coordinated Programs in sorghum, millet, pulses and dryland agriculture. The promising seed material is being made available to Indian scientists and the real workers in various research projects are being provided opportunities to visit ICRISAT and select suitable materials for strengthening and accelerating their programs. The Agricultural Universities of Andhra Pradesh and Maharashtra are cooperating in village studies initiated in 1975.

7. Other Organizations

ICRISAT recognizes a great backup resource in the scientific laboratories and institutions in the more highly developed nations. These will be cultivated and developed as they are identified and mutual interests and opportunities can be matched. Several have already been identified. Among those of particular interest are the sorghum protein quality program at Purdue University, the conversion and disease resistance programs with sorghum at Puerto Rico and Texas, the program on physiology of stress at the University of Nebraska, the drought stress program at Saskatoon, the projects on stimulants to germination of striga and orobanche at Sussex and the Weed Research Organization of the U.K., programs on water relations and on legume improvement at Cambridge, the root development studies at Letcombe Laboratories, U.K., and many others. Generally, the major financing of these projects will come from sources outside ICRISAT, but their results will be of considerable importance to ICRISAT's program. Through joint collaboration, the relevance of such projects to the

semi-arid tropics can be sharpened, facilities and scientific talent of such institutions can complement those of ICRISAT and relieve it of certain segments of work; ICRISAT can in turn provide needed facilities and environments for study of the field aspects of the problems under investigation. Other international institutes have already made considerable progress in developing this type of cooperation, and ICRISAT regards it as an important avenue in development.

March 31, 1975

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TABLE I

ICRISAT - HYDERABAD
1976 Core Budget
SUMMARY OF COSTS BY PROGRAM AND ACTIVITY -1972-1979

(U.S. \$ 000)

	Actual			Budget 1975		Estimated Budget	Projected		
	1972	1973	1974	Original	Current Estimate	1976	1977	1978	1979
<u>Major Activities:</u>									
1. <u>Research</u>									
Farming Systems		120.2	161	321	332	436	510	520	550
Plant Sciences:									
Sorghum and Millet		302.2	826	513	518	705	830	850	930
Chickpea and Pigeonpea		3.8	337	467	486	659	752	800	900
Groundnut				-	175	300	500	600	600
Agricultural Economics		0.4	76	145	145	161	164	170	180
Biochemistry, -Food Tech. Nutrition		-	16	88	85	103	111	120	130
TOTAL:		426.60	1,416	1,534	1,741	2,364	2,867	3,060	3,290
2. <u>Training and Conferences</u>									
Training and Fellowship		-	3	216	152	218	290	350	400
Conferences and Symposia		-	30	77	100	140	140	150	200
TOTAL:		-	33	293	252	358	430	500	600

TABLE I (Cont'd)

	Actual			Budget 1975		Estimated Budget	Projected		
	1972	1973	1974	Original	Current Estimate	1976	1977	1978	1979
3. Support Operations									
a) Service Activities:									
Library - Documentation		20.1	24	75	75	120	154	160	180
Information Services		-	78	107	136	183	186	200	250
Common Lab Services		-	21	51	33	75	101	110	150
Farm Services		171	293	307	390	423	493	500	550
Transportation - Motor Pool		69.9	148	100	97	74	70	130	150
Statistics		-	-	60	60	102	110	120	150
TOTAL:		261	564	700	791	977	1,114	1,220	1,430
b) General Administration:									
Board of Trustees		40.7	41	75	75	65	70	75	80
Administration		267.6	*309	440	342	464	500	500	550
Physical Plant Services		-	-	160	55	69	150	200	300
TOTAL:		308.3	350	675	472	598	720	775	930

*Includes Physical Plant Services

TABLE I (Cont'd)

	Actual			Budget 1975		Estimated Budget	Projected		
	1972	1973	1974	Original	Current Estimate	1976	1977	1978	1979
4. General Operations									
Communications		19.2	54	55	55	60	65	75	80
Office Occupancy		51.6	229*	60	221	141	113	150	30
Staff Housing (initial expenses)		27.2	53	5	45	31	31	25	-
General Insurance		0.2	4	15	10	10	15	15	15
General Supplies		45.5	113	30	100	75	75	75	80
TOTAL:		143.7	453	165	431	317	299	340	205
5. All Other									
Contingency, including provision for future price changes:				383	238	686	470	405	545
TOTAL CORE:	184.3	1,139.60	2,816	3,750	3,925**	5,300	5,900	6,300	7,000

*Includes costs associated with rehabilitation
of villages moved from Institute land.

**Includes groundnut program budget of \$175,000

1976 BUDGET
ICRISAT - HYDERABAD
SUMMARY OF SOURCES AND APPLICATION OF FUNDS
(US \$ Thousands)

TABLE II

	Actual		Estimate	Budget
	1973	1974	1975	1976
<u>SOURCES OF FUNDS</u>				
1. Core and Capital				
a. Unrestricted				
(1) Canada	-	1,847.9	800.0	
(2) Norway	182.6	444.7	730.0	
(3) Sweden	-	1,175.3	1,300.0	
(4) Switzerland (Note A)	280.0	-	230.0	
(5) United Kingdom	233.0	408.4	535.0	
(6) USAID (Partial - remainder allocated to excess property)	517.7	885.9	1,947.4	
(7) Federal Republic of Germany	458.9	694.1	440.0	
(8) Australia	-	-	422.3	
(9) Belgium	-	-	25.0	
(10) Netherlands	-	-	175.0	
(11) United Nations Environment Programme	-	-	120.0	
(12) International Development Authority	-	-	-	*
Total Donors	1,672.2	5,456.3	6,724.7	
Earned Income	164.2	1,008.1	200.0	
Capital				
USAID Excess Property - 1974	227.3	114.1	112.6	
Federal Republic of Germany (For Electric Generators, Refrigeration System)	-	-	260.4	
Unexpended Balances (Note - B)	1,235.9	1,292.5	4,814.9	
	3,299.6	7,871.0	12,112.6	
b. Restricted				
(1) UNDP	507.7	583.1	848.0	893.0
(2) IDRC	231.0	-	350.0	
Total Donors	738.7	583.1	1,198.0	
Unexpended Balances (Deficit)	-	432.6	(147.7)	
Total Restricted	738.7	1,015.7	1,050.3	
c. Special Projects				
Nigeria	-	-	160.0	
Thailand	-	-	10.0	
West Africa - UNDP	-	-	634.0	
Total - Special Project Grant	-	-	804.0	
d. Gross Core and Capital Funds Required	4,038.3	8,886.7	13,966.9	
Less Unexpended Core and Capital Balances	(1,235.9)	(1,292.5)	(4,814.9)	
Less Earned Income	(164.2)	(1,008.1)**	(200.0)***	
e. Net Funds required from CG	2,638.2	6,586.1	8,952.0	
	=====	=====	=====	

TABLE II (Cont'd)

	Actual		Estimate	Budget
	1973	1974	1975	1976
<u>APPLICATION OF FUNDS</u>				
1. Core Operations	1,139.6	2,816.2	3,925.0	4,800.0
2. Special Projects	-	-	804.0	
3. Capital				
Capital Expenditure	1,570.3	1,403.3	6,500.0	5,500.0
Working Capital	-	-	-	-
Total Capital	1,570.3	1,403.3	6,500.0	5,500.0
4. Unexpended Balances- (Deficit)				
Unrestricted-Core, Capital and	895.8	4,814.9	2,667.6	
Retained Income				
Restricted	432.6	(147.7)	70.3	
Total-Unexpended Balances	1,328.4	4,667.2	2,737.9	
5. Total Applications	4,038.3	8,886.7	13,966.9	10,300.0

(A) Contributions of \$ 150.0 from Government of Switzerland for the year 1974 received during December, 1973 were reflected in 1973 accounts.

(B) Includes \$ 396.7 transferred from Fully Expended Capital Grants as at December 31, 1973 in respect of Steel Stocks, advances for Steel and accruals for unexecuted purchase orders for Steel transferred during 1974 to the respective inventory/advance account.

* Amount not yet indicated. \$1,000,000 tentatively estimated in communication from CGIAR dated April 30, 1974.

** Includes interest earned on short term investments, net gain in exchange fluctuations, refunds on excise duty paid, farm sales, miscellaneous income and, as suggested in CGIAR document of February 12, 1975, the share of indirect costs on restricted projects. This latter item represents a book transfer within the institute which has the effect of simultaneously inflating the figures for both income and expenditure artificially. We believe this item should be treated in a different manner.

*** Includes only anticipated sale of farm produce and interest on short term investments.

1976 BUDGET
ICRISAT - HYDERABAD

TABLE III

SUMMARY FINANCIAL DATA 1973-1976
(U.S. \$ 000)

	1973	Actual 1974	Estimates 1975	Projection 1976
<u>CURRENT ASSETS:</u>				
Cash	138.0	426.4	500.0	
Short Term Investment	1,047.9	3,984.6	-	
Receivables from Donors	731.2	66.3	500.0	
Other Receivables	90.0	423.2	1,000.0	
Inventories	5.1	832.1	1,000.0	
Prepaid Expenses	-	12.7	20.0	
Other Current Assets - Accrued Interest	3.5	19.7	-	
Total Current Assets	2,015.7	5,765.0	3,020.0	
<u>FIXED ASSETS:</u>				
Operating Equipment	42.9	174.0	313.8	
Research Equipment	333.4	752.6	1,235.7	
Vehicles	189.0	479.9	643.3	
Furnishings & Office Equipment	153.1	362.8	962.5	
Buildings	651.2	478.7	3,902.4	
Other Fixed Assets - Site Development and Campus External Work	358.2	456.1	1,294.0	
Assets in Transit	-	30.3	30.3	
Contingency	-	-	852.4	
Total Fixed Assets	1,727.8	2,734.4	9,234.4	
Total Assets	3,743.5	8,499.4	12,254.4	

TABLE III(Contd)

	1973	Actual 1974	Estimates 1975	Projection 1976
<u>LIABILITIES:</u>				
Accounts Payable	401.6	253.7	407.1	
Grants Received in Advance	-	260.4	-	
Other Liabilities - Overdraft with First National City Bank, New York	285.6	583.7	-	
Total Liabilities	687.2	1,097.8	407.1	
<u>CAPITAL BALANCES & UNEXPENDED FUNDS:</u>				
Capital Grants:				
Fully Expended	1,727.8	2,734.4	9,234.4	
Unexpended	213.5	42.5	-	
Sub-Total	1,941.3	2,776.9	9,234.4	
<u>Unexpended Operating Grants:</u>				
Core and Capital	518.1	3,600.0	1,295.2	
Restricted Projects	432.6	(147.7)	70.3	
Sub-Total:	950.7	3,452.3	1,365.5	
Retained Income	164.3	1,172.4	1,247.4	
Total Capital Balances	3,056.3	7,401.6	11,847.3	
Total Liabilities and Capital	3,743.5	8,499.4	12,254.4	

EXPLANATIONS TO TABLE III
(U.S. \$ 000)

Current Assets:

Cash & Bank Balances:

Petty Cash Funds	\$	4.0	
National Grindlays Bank Limited, Hyderabad		<u>422.4</u>	<u>426.4</u>
Short term investment as on 31 December, 1973 the amount under investment and was not in the bank account			<u>3,984.6</u> =====
Receivables from Donors : From USAID			23.7
Excess Property Grant		114.1	
USAID - less property received		<u>71.5</u>	<u>42.6</u>
Total :			<u>66.3</u> =====

Other receivables:

Staff Advance		38.6
Advance to Contractors, Suppliers		330.2
Receivables - Farm Produce Sales		3.3
Deposits		<u>51.1</u>
		<u>423.2</u> =====

Inventories:

Value of Stockes in hand:		
Farm Supplies (Fertilizer etc.)		68.0
Building Materials (Steel, Wiremesh etc.)		<u>764.1</u>
		<u>832.1</u> =====

Prepaid Expenses (Expenses pertain
to subsequent year)

12.7

Other assets - Accrued Interest
on short - term investment and
voluntary loan contribution to
A.P.S.E.B.

19.7

EXPLANATIONS TO TABLE III(Contd)
(U.S. \$ 000)

Liabilities:

Account payable:

Accruals & Commitments		253.7
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		=====
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Overdraft:

Book Balance with checks issued

		583.7
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		=====
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Capital Balances

Fully expended = Fixed Assets

Unexpended = Excess property
receivable from
USAID

Unexpended Operating Grants:

Core Capital

Opening Balance on 1-1-1974	518.1	
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Adjustment in respect of Steel stock and advances of 1973	396.7	
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Grants received during year	5,456.3	6,371.1
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Less (i) Core Expenditure

	2,816.1	
- 1,163.4 (Restricted		
expenses)		

	1,652.7	

Less (ii) Capital Expenditure

	1,403.3	
- 284.9 USAID excess		
property received		

	1,118.4	

Total Core & Capital

		2,771.1
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		3,600.0



AT ICRISAT

January
February
March

1975

International Crops Research Institute
for the Semi-Arid Tropics

Hyderabad
A. P., India

Prime Minister Indira Gandhi Speaks on ICRISAT's Mission

"I am very happy to be here today because we give great importance to this Institute and the work that it is undertaking."

With those words, Prime Minister Indira Gandhi began a wide-ranging talk to a crowd of 3,000 gathered to commemorate the start of construction of ICRISAT's research complex on January 11, 1975.

The Prime Minister spoke after making an inspection tour of the ICRISAT experiment station accompanied by government officials and the ICRISAT Governing Board and scientists.

Mrs. Gandhi outlined ICRISAT's mission and its importance to India and the world's semi-arid tropics. She said food remains the "foremost and most important" problem for India and many other parts of the world.

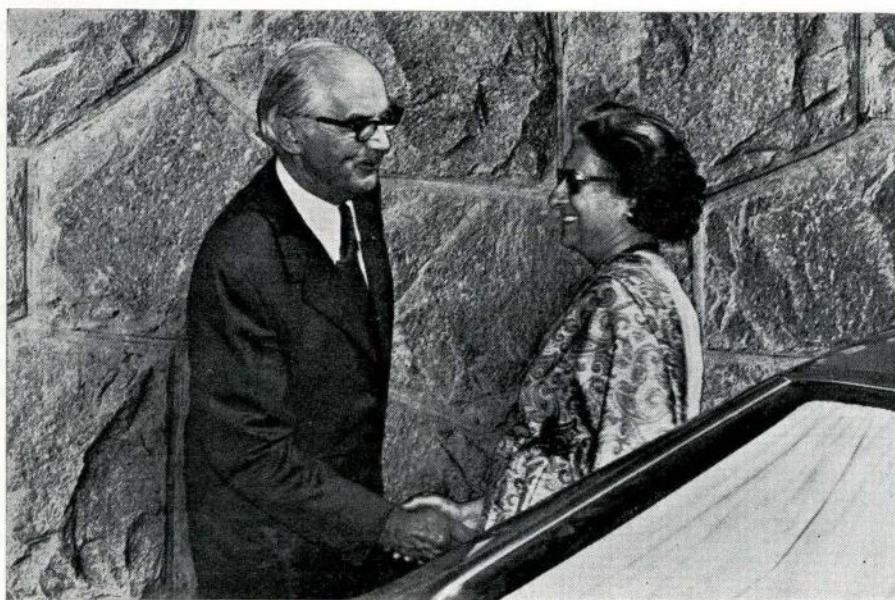
Help for Drylands

The Prime Minister explained that substantial progress had been made in irrigated agriculture. In the semi-arid and dry areas, however, yields remain low and production and income of farmers fluctuate widely, depending on the vagaries of the monsoon.

The shortfall in production in dry areas in years of poor rainfall seriously affects the food situation and the economy as a whole, Mrs. Gandhi reported.

She said that India was looking forward to guidance from ICRISAT in the urgent task of modernizing farming in the rainfed areas. She also expressed special interest in ICRISAT's groundnut research program and pointed out that India must substantially increase the availability of fats and oils, since the per capita intake is only 10-grams, about a third of what is considered essential.

A Warm Welcome



Prime Minister of India Indira Gandhi is welcomed to ICRISAT by Dr. R. W. Cummings, director of the Institute. Mrs. Gandhi spent several hours in discussions with ICRISAT officials at the time of her visit on January 11

In conclusion, Mrs. Gandhi said, "I am glad to lay the foundation stone of the building complex of this Institute which symbolizes the pooling of talents of scientists and technicians regardless of nationality, race or color in this greatest of all wars, the war against hunger. The Government of India will continue to extend full support to the aims and programs of this Institute and may I wish all of you success in your work."

Dr. C.F. Bentley, chairman of the ICRISAT Governing Board, Dr. M.S. Swaminathan, director general of the Indian Council of Agricultural Research and vice-chairman of the ICRISAT Governing Board, Mr. R.I. Jackson, deputy director general of the Food and Agriculture Organization of the United Nations (FAO), Mr. Bilsel Alisbaah, deputy resident representative of the World Bank and Dr. R.W. Cummings, director of ICRISAT, also addressed the assembly.

Research Highlights

Sorghum

Recording trial observations, selfing, tagging steriles, rouging off-types, harvesting, threshing, and other plant breeding activities proceeded on an unprecedented scale this season. The program is beginning its outreach phase with pilot testing projects abroad and will continue development towards a comprehensive, multi-locational testing and selection effort throughout the semi-arid tropics. Other advancements were made in these areas:

Germplasm: Observations on ear-head compactness, grain color, glume traits and other characters were recorded to confirm identity of World Collection materials. Classification of this and other material is underway.

Entomology: Resistance testing blocks have been established and data are being collected on shootfly and other pests. Several sorghum lines showed considerable resistance or tolerance. Extensive survey trips and field work has led to the identification of a number of pest species.

Pathology: A detailed study of head molds was launched using 62 lines which showed promise under field conditions; development of the downy mildew "sick plot" continued; and extensive survey trips offered guidelines for future investigations. Those and other studies are

providing a base for intensive field work during the rainy season.

Physiology: Studies on growth and development, date of sowing, seedling and grain development, water stress, nutrient translocation, seedling vigor, root development and other factors with potential relationships to sorghum yield are already providing needed data.

Grain Quality Testing: ICRISAT's Biochemistry and Nutrition Laboratory has analyzed thousands of sorghum samples this season; protein ranged from 6.3 to 18.7 percent. Lysine varied between 1.42 to 2.99 percent of the total protein in 22 samples.

Pearl Millet

January and February were important breeding months for the pearl millet improvement program. Crossing, selfing and sibbing were carried out and extensive observations recorded in the germplasm, composite and hybrid program.

By the end of March, all post-monsoon materials except late composites had been harvested. The harvest included material for international testing and a series of yield trials. Some hybrids in these trials gave yields 40 to 65 percent higher than HB-3. Planting of a third crop was also completed in March.

Related Studies

Supportive research by physiologists, plant pathologists, entomologists

and the Biochemistry and Nutrition Laboratory experts is developing rapidly. Special projects during the post-monsoon season included: a genotype evaluation trial; a growth and development study; a date of sowing trial; a water stress study; stem anatomy studies; an ergot survival study; development of a downy mildew "sick plot"; rust scoring; and insect identification and control. Screening for protein on hundreds of samples revealed a range of 6.0 to 20.6 percent; oil content ranged from 6.0 to 17.2 percent.

Pigeonpea

The pigeonpea breeding program, like ICRISAT's other crop improvement efforts, has now become a yearlong endeavor. The intensive crossing work of December stretched into the new year, overlapping selection work of material for yield testing and breeding; the harvesting and threshing of the 1974 monsoon materials continued over the past three months, while planting operations were conducted simultaneously in the off-season nursery and at eight locations for the monthly plantings study.

Related Studies

Pulse pathologists and entomologists have continued to make progress on basic identification studies in observation plots and multi-locational field surveys. While high priority has been put on wilt, sterility virus and pod borer studies, other diseases and insects are receiving attention. Resistance screening is in progress.

A contract has been signed with the Home Science College of the Andhra Pradesh Agricultural University to conduct cooking quality tests on samples of special interest to breeders; the ICRISAT Biochemistry and Nutrition Laboratory is continuing analyses for protein content.

Male Sterility

In addition to the identification of nine male sterile plants reported in December, 59 were found in January. Based on the presence or absence of pollen, 20 are considered to be self-incompatible and the balance male sterile. Comprehensive studies on vegetative propagation are already underway.

ICRISAT Pearl Millet Breeder J.V. Majmudar examines pollinated material. The Pearl Millet Improvement Program is one of ICRISAT's most advanced projects.



Research Highlights

Chickpea

Since the bulk of the chickpea material was planted in early November last year, breeding activities have been intense in 1975. To generate genetic variability and new combinations, 1400 crosses were made, including 900 single and 500 double, triple and complex crosses.

Selection has been completed on 127 F₁ crosses and 324 F₂ populations. Twenty-four F₃ bulk populations were harvested and will be advanced by the single seed descent method.

An advanced yield trial, preliminary yield trial, All India Coordinated Trial, and fertility response trial comprising 1000 varieties were harvested.

The entire breeding material, plus new selections from continued germplasm evaluations, will be advanced in the off-season nurseries in Lebanon and Lahaul Valley in North India.

Related Studies

Physiology and entomology studies have continued to probe for basic information which plant breeders require for selection. Pathologists have made rapid gains in isolating pathogens and identifying symptoms at ICRISAT and on extensive survey trips throughout India. They have started screening against several diseases.

Groundnut

ICRISAT's groundnut program is underway—but 10,000 miles away from Hyderabad headquarters on the light soils of North Carolina. ICRISAT entered an agreement with North Carolina State University which has undertaken the initial assembly of all available germplasm lines.

The work is being conducted under the supervision of Groundnut Breeder and Geneticist Walter C. Gregory, who has been involved in survey and collection of both cultivated and exotic types for many years. Dr. Gregory will come to Hyderabad in June to supervise the planting of the North Carolina collection at the ICRISAT experiment station.

Farming Systems

A basic goal of the Farming Systems program is to develop improved land and water management systems which can be implemented during off-seasons. In the semi-arid tropics, labor and animal power often remains underemployed for several months when crops aren't grown.

In addition to harvesting post-monsoon crops, recording data from field studies, and developing farm implements during the past three months, Farming Systems scientists have launched a series of activities that amply demonstrate how surplus labor and power resources can be used to reverse the relationship of man as servant and nature as master in the semi-arid tropics.

Demonstrating Potential

Late rains left surplus water in ICRISAT runoff storage ponds this season so a third crop is being grown on normally fallowed fields.

After harvest of the post-monsoon crop, land was plowed. When rains come in June, the seedbed will be ready. Since the land involved was under a ridge and furrow system, the soil was friable enough to permit dry plowing.

A 15.2-hectare black soil watershed with five storage ponds is being developed exclusively by human labor and bullock power. The first storage pond was completed in 18 days; the second in 15. This work will continue through the "idle" season.

Red soil watershed development—involving construction of an above ground reservoir, waterways, roads and terraces—will continue. Laborers water the 900 fruit trees in one watershed using a bullock-drawn tanker.

Rewards of these and additional development activities are not confined to employment of otherwise idle manpower. When the June rains arrive, a capital payoff will result from higher yields, more stable production (which allows risk-minded farmers judicious use of chemical inputs) and reduced soil erosion.

Program Review

Land development has been combined with program development in recent months. Aided by the recommendations of Farming Systems Consultants M.J.T. Norman, University of Sydney, and B.C. Wright, Rockefeller Foundation, ICRISAT's Farming Systems program has developed a "group-system" approach whereby scientists will regularly exchange ideas on interrelated areas of activity.

The consultants produced a joint report which offered additional recommendations on program structure and boundaries plus international cooperation. A separate report by Dr. Norman focused on the role of ICRISAT in research related to farm animals, forages and pastures.

Economics

Since beginning operations about one year ago, the Economics unit has launched a number of supportive studies aimed at providing research guidelines to ICRISAT's major programs.

Studies on human nutritional status, price elasticity of major crops, and consumer preferences associated with the ICRISAT crops have special relevance to the Crop Improvement program.

A cost-benefit analysis of agronomic trials and watershed investigations is underway in the Farming Systems program. A study of water storage facilities will also contribute to Farming Systems research plans. Continuing research and compiling of statistical data on countries and regions of the semi-arid tropics will benefit all programs.

Village-Level Study

A basic goal of economic research at ICRISAT is to increase our understanding of traditional cultivation practices and present resource allocation in the semi-arid tropics, and to use that knowledge to guide the Institute's research priorities. Preparations are nearly complete for conducting a village-level study which will continually generate that type of information and help to maintain ICRISAT's farmer orientation.

International Workshop on Grain Legumes

Twenty-eight agricultural scientists from 17 countries participated in ICRISAT's first International Workshop on Grain Legumes held in Hyderabad January 13–16.

Discussion in the first session focused on resource papers presented by ICRISAT Pulse Breeders K. B. Singh, A.K. Auckland, D. Sharma and J.M. Green. Papers on agronomic considerations of pulses by M.C. Saxena (India) and nitrogen fixation by P. Dart (U.K.) rounded out the session.

The next two sessions were devoted to review of national research programs. E.J. Corbin reported on chickpea research in Australia; T. Bezuneh, Ethiopia; J. Jaffari, Iran; G.C. Hawtin, Middle East; J. I. Cubero, Spain; and D. Eser, Turkey.

R. P. Ariyanayagam reported on pigeonpea research in Trinidad; R. Abrams, Puerto Rico; E.S. Wallis, Australia; and S. Ramanujam, India. Experimental approaches to development of high yielding pulses was discussed in a paper by H.K. Jain (Indian Agricultural Research Institute).

J.H. Hulse (Canada), W.V. Royes (Jamaica) and P. Pushpamma and S.G. Srikantia (India) presented papers and offered recommendations on the nutritional quality of pulses in the fourth session.

Germplasm and biological adaptation were covered in the fifth session with papers presented by ICRISAT Germplasm Botanist L.J.G. van der Maesen and B.R. Murty (Indian Agricultural Research Institute).

The workshop devoted the next two sessions exclusively to breeding techniques and focused on papers presented by K.J. Frey of Iowa State University and K.O. Rachie, International Institute for Tropical Agriculture.

Disease and insect resistance was the subject of papers presented in the eighth session by E.E. Hartwig (U.S.) and ICRISAT Entomologists J.C. Davies and S.S. Lateef.

Twenty-five papers were presented and discussed before the participants separated into committees for discussions on germplasm, chickpea breeding, pigeonpea breeding, pest and

disease resistance and grain quality. The committees' recommendations were formally presented in the final session.

S. Chandra (Central Soil Salinity Res. Inst., Haryana, India), Dr. L. R. House (Arid Lands Agr. Dev. Program, Lebanon), W. J. Kaiser (East African Agr. & Forestry Research Organization, Kenya), B. P. Pandya (G.B. Pant Univ. — India), S. Rehm (Univ. Göttingen, W. Germany), and ICRISAT Governing Board Members E. Aberg and D.W. Thorne also participated in the workshop.

ICRISAT Reviews Programs

ICRISAT staff members assembled for an intensive, in-house program review March 4–7. Dr. J. S. Kanwar, associate director of the Institute, chaired the sessions as each program unit presented research plans for the 1975–76 growing seasons.

He asked staff members to focus on two main questions: Why? and How? "Basically, we want to examine the purpose behind each research project and then determine the best way to achieve the stated goal," Kanwar explained at the inaugural session.

The exercise was aimed at avoiding duplication of effort between units or undertaking research with a low priority or unattainable goals. The associate director told the group that an interdisciplinary effort can only reach its objectives of full cooperation and collaboration, if communication channels remain open.

The reviewers had an additional responsibility. They were asked to study the recommendations of the two international workshops which were held recently to formulate guidelines for ICRISAT's Farming Systems and Grain Legumes Improvement programs. Efforts were made to incorporate the workshop recommendations into the 1975–76 research program.

"The exercise had two immediate benefits," Kanwar said. "First, it subjected immediate research plans to a detailed review, and—equally important—established a precedent for a formal annual review which opens a dialogue that will continue year round."

"The most important question asked about any of our research projects," Kanwar pointed out, "is the one which was asked most frequently during this review session: Will it achieve the goals of ICRISAT?"

ICRISAT Welcomes New International Staff

Dr. C. M. Pattanayak recently joined ICRISAT as Plant Breeder and will work in Upper Volta with the cooperating program in West Africa. He was formerly Project Coordinator for Seed Development, Hi-Bred India (Private) Ltd., Hyderabad, India.

Dr. L. J. G. van der Maesen assumed the post of Pulse Germplasm Botanist on Jan. 4. He was formerly Associate Expert on a FAO project in Iraq.

Dr. J. A. Warren, University of New Hampshire served on a consulting assignment at ICRISAT in February. Dr. Warren examined the Institute's computer requirements.

New Donors

ICRISAT will receive support from six new donors this year. The United Nations Environmental Program and the governments of Australia, Belgium, the Netherlands, Nigeria and Thailand have pledged funds for 1975.

ICRISAT receives support from these additional members of the Consultative Group on International Agricultural Research: the governments of Canada, Federal Republic of Germany, Norway, Sweden, Switzerland, U. K. and U.S.; the International Bank for Reconstruction and Development; the International Development Research Center, Canada; and the United Nations Development Program.



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INTERNATIONAL CROPS RESEARCH INSTITUTE

for the

SEMI-ARID TROPICS

A PROPOSAL FOR RESEARCH ON GROUNDNUTS (ARACHIS) BY

THE INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE

SEMI-ARID TROPICS

by

A.H.Bunting, W.C.Gregory, J.C.Mauboussin and J.G.Ryan

" I C R I S A T "

Hyderabad-India

March 1974

THE AUTHORS

A. H. Bunting is Professor of Agricultural Development Overseas, and formerly Professor of Agricultural Botany, in the University of Reading, U.K. He has been concerned with many aspects of research on groundnuts since 1947, first in Tanganyika and Sudan, and subsequently in Nigeria and other African countries.

Walton C. Gregory is Professor of Plant Science and Genetics at North Carolina State University, Raleigh, N.C. He has bred improved varieties of groundnuts for North Carolina, and he has based important and indeed unique studies of variation, genetic relationships, taxonomy and evolution in the genus Arachis on a very large array of materials, including very many hitherto unknown wildforms, collected during a series of extensive expeditions (some with A. Krapovickas) in South America.

J. C. Mauboussin is a staff member of DRSTOM with the rank of Director des recherches, attached to IRAT, as ingenieur en chef de recherches. He is the senior officer concerned with the breeding and protection of plants at Bambey, Senegal, and has a particular interest in groundnut improvement, including agronomy as well as breeding.

contd.....

James G. Ryan is Economist on the staff of ICRISAT. He was formerly a Senior Economist with the New South Wales Department of Agriculture, in Sydney, Australia. His major interest has been in research on production economics and agricultural policy questions.

A PROPOSAL FOR RESEARCH ON GROUNDNUTS (ARACHIS) BY THE INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

In January 1974 the Director of ICRISAT, Dr. Ralph Cummings, invited us to meet together at ICRISAT to review world research needs on groundnuts, to consider whether ICRISAT ought to help to meet these needs, and if so to suggest a possible programme of international research on the crop which might be submitted to the Governing Board of the Institute.

We met at Hyderabad on 20th March 1974 and completed the outline of the report before Mauboussin had to return to Senegal on 24th. The present report was completed on 28th March after consultations with Dr. Cummings.

It considers first the role of groundnut in the world, and in particular in the nations of the semi-arid tropics, as a source of human and animal food and as an economic crop. It then considers whether or not research on groundnuts should be included within the programme of ICRISAT. We set out the reasons which lead us to conclude that ICRISAT could make a unique and essential contribution to groundnut research for the semi-arid tropics, supporting and extending the parallel

efforts of individual nations, and we advise that it should do so. We then go on to outline a possible research programme to achieve these ends.

We hope that this report will help the Institute to determine its future policy on the crop. Those of us who have been privileged to come to the Institute as guests wish to offer our grateful thanks for generous hospitality and innumerable thoughtful and unobtrusive kindnesses. We stand at the Institute's service if there should be anything more we can do.

A. H. Bunting
W. C. Gregory
J.C.Mauboussin
J. G. Ryan

A PROPOSAL FOR RESEARCH ON GROUNDNUTS (ARACHIS) BY THE INTER-
NATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

GROUNDNUTS IN WORLD AGRICULTURE AND IN THE
SEMI-ARID TROPICS

1. The cultivated groundnut (peanut) Arachis hypogaea, is an annual or weakly perennial leguminous plant grown in most tropical and sub-tropical countries, and in areas of continental climate in the temperate zone, for its seeds (kernels) which contain up to 50% of a non-drying oil and about 25% of protein. The oil is used directly for food and cooking, and industrially for margarine and soap. The protein also contributes directly to human diets, and, as a constituent of the press-cake, is an important component of animal (including poultry) feeds. The vine (haulm) can be a useful forage. A coarse paperboard can be made from the shells, which are also used for fuel, and as a source of furfural for the plastic, chemical industry.

2. As a food crop, groundnuts appear to contribute significantly to human diets in the semi-arid tropics.

They are eaten raw, boiled or roasted, in soups, stews and fried 'nut' cakes, and in sauces and flavourings. If it is assumed, as we believe it can be, that all recorded production in India and Nigeria which is not exported is consumed by humans, the average amounts of protein contributed per caput per day to human diets are 3.9 and 6.4, respectively, which is 10% or more of the standard estimated requirement of about 40g. per day. The oil consumed will be about twice this quantity, corresponding to a daily intake of about 80 and 120 k.cal. The calculated figures for Senegal are considerably larger, but in that case there is probably a large unrecorded movement of groundnut to the humid and protein-short countries further south, as is the case with cowpeas. In the United States, the reported average directly edible consumption of 3.6 Kg./caput/year (half as peanut butter) is equivalent to a daily intake of about 4.5g. of protein - about 5% of the average daily intake of 90-100g. protein. The income elasticity of demand would appear to be unusually large. As in most grain legumes, this protein includes a smaller proportion of sulphur-containing amino acids, and rather less lysine, than the standard reference protein, but it

evidently makes a useful contribution to the mixed diets of which it forms a part (Table 1). It is also a valuable source of thiamine (cocarboxylese, vitamin B₁). As a cattle feed, the vine (haulm), when properly harvested, has a feed value similar to that of alfalfa (lucerne) (Table 2).

3. In 1971-72, the world produced 115 million tons of oilseeds, of which soya contributed 50 million, mostly in the United States and China. The amount of edible oils extracted from world production was about 26 million tons of oil. After cottonseeds, groundnuts were the next most important oilseed; about 17 million tons (in shell) were produced, from which about 3.4 million tons of oil were extracted. Of this total, two thirds are produced (on about three fourths of the total world groundnut area) in the 30 countries of the semi-arid tropics (Table 3), where groundnuts are the most important oilseed. India is the largest producer (4.5 million tons in shell) followed by West Africa (3.7 million), China (2.7 million), the United States (1.5 million) and Brazil (0.9 million).

4. In many countries of the semi-arid tropics, moreover, groundnuts occupy more land and yield more produce than any of the other annual legumes (Table 4.)

5. Groundnuts are also important in the trade of these countries (Table 5). In recent years, the largest exporters of groundnuts have been Nigeria (27% of world total) Senegal (18%), India (13%), and Argentina (5%). The semi-arid countries export on average 20% of the groundnuts they produce, but some countries export a far greater proportion - 65% in Senegal, over 50% in Argentina, more than 35% in Nigeria and about 30% in Brazil. The major importers of groundnuts (for pressing or confectionery), and of groundnut oil, cake and meal are France, U.K., West Germany and Japan. In 1970, the total world trade in groundnuts was worth U.S.\$ 481 million, of which about \$ 360 million came from the countries of the semi-arid tropics. (In contrast, of soya exports worth U.S. \$ 2,116 million, 85% came from the United States). Groundnuts make important contributions to the foreign exchange earnings of the semi-arid countries, which are so necessary to pay for the equipment and purchased inputs needed to expand food and other farm production. In particular

countries, the fraction of total foreign exchange earned from groundnuts is very large - 50% in Senegal, 12% in oil-rich Nigeria, and 8% in Sudan. Groundnuts provide 3.5% of India's foreign earnings, and the average for the countries of the semi-arid tropics as a whole is 3%.

6. In 1972-73, when prices of animal feeds and farm products generally increased sharply, the wholesale prices in Madras were U.S.\$ 375 per ton of kernels, \$ 750 per ton of oil, and \$ 140 per ton of cake and meal. The trade expects the demand for groundnuts and groundnut products to remain firm, as indeed it has been, by and large, for many years.

7. Important as the crop is, the yields in most producing countries of the semi-arid tropics are small (Table 6).

In the United States, the average yield, in shell, was about 2200 Kg./ha. in 1970; and yields of the same order of magnitude are obtained in Italy, Israel, Japan and Turkey. In other countries of Asia, however, and in the semi-arid tropical countries as a whole, the average in 1970 was 830-840 Kg./ha. only; and the African average of 725 Kg./ha. was offset by a mean from Latin America of

nearly 1300 Kg./ha. Our own experience, based on the results obtained by the best farmers and by research stations, satisfies us that improved practice, better varieties, and adequate crop protection, guided by research, can increase these yields considerably. We know also that the governments as well as the farmers, of the groundnut growing countries wish to do this, and that it is one of the objectives of their agricultural research services in every case.

8. We asked ourselves first whether the groundnut requires international research. We have concluded that groundnut research at national stations in most countries (even in the United States) is not sufficiently extensive, penetrating, continuous or coordinated to allow progress at the rate which development programmes require. It would benefit very considerably from international cooperation, exchange of information, and training, and from the research in depth, and in new directions, which an international programme would provide. This is particularly the case in respect of genetic resources. As we explain later in this report, many thousands of cultivated varieties, and a very remarkable wealth of wild species, offer

prospects for genetic improvement (including the control of some of the most important diseases) which can only be realised through the resources, scale of work, concentration in depth, continuity, and world-wide linkages of an international programme. We, therefore, answered this first question in the affirmative.

9. We asked ourselves next whether the groundnut is an appropriate subject for the international agricultural research system founded through the Consultative Group. Since it is an important food crop in many developing nations, we have concluded that it would be consistent with the mandates of the system. That it is a cash crop can be no bar; only by selling crops can farmers help to feed the nations as a whole. The possible counter-argument that it is also an industrial and export crop, so that research for it should, therefore, in the first place be conducted by industry in cooperation with national governments seems to us to fail because there is, in fact, no such research (except in those parts of West Africa associated with France) and we know of no prospect of any. Moreover, by earning foreign exchange, groundnuts can help food production indirectly. In

addition, now that the International Board for Plant Genetic Resources has been established, the potential of the International Institute system for the improvement of the groundnut crop will be even greater than before. For all these reasons we answered the second question in the affirmative also.

10. Finally, of the Institutes in existence or projected, we have no doubt that ICRISAT is the appropriate choice. As we have said, groundnuts are primarily a crop of the semi-arid tropics, and not of the humid or higher-altitude tropics. They are in any case bound to form part of the Farming System which ICRISAT will study. We therefore recommend that research in the groundnut crop be included within the ICRISAT programme.

MAIN FIELDS OF RESEARCH ON GROUNDNUTS

11. The main research needs of the groundnut crop are reviewed below under the following headings (the six P's of agricultural research):-

- A. Protoplasm: research related to the improvement of groundnuts by breeding.
 - B. Protection: research related to the protection of the crop against fungus and virus diseases, insects, nematodes and other soil animals, and weeds; and the problems of plant quarantine.
 - C. Production: research related to production methods: agronomy, crop physiology, environmental sciences including agro-meteorology and soil questions, heuristic simulation modelling of crop and genotype environment relations; Rhizobium; power requirements and mechanization.
 - D. Post-harvest technology and use.
 - E. Prices, profits and people; economic and social information and research.
 - F. Professional training and outreach.
12. Inevitably many of the needs we outline for groundnuts are similar to those for other crops - for example in environmental sciences, cytogenetics, cultural methods and

training. We hope that ICRISAT will develop a specific groundnut project, which will need some full-time staff of its own, but we expect that the elements which are common to other projects also will be managed in such a way that the relevant common disciplines are not fragmented between projects and the laboratories and specialized equipment needed are used to full capacity.

RESEARCH RELATED TO IMPROVEMENT BY BREEDING

13. Compared with crops like rice, wheat or sweet potatoes, the range of variation available to agronomists in cultivated groundnuts is surprisingly small. The variation is partly homologous; and all of it falls into no more than about 30 distinct clusters of varieties. Since the groundnut is very largely self fertilised, so that every plant is the potential parent of a pure line, there is some scope for further selection, particularly since so many of the 'varieties' maintained at experiment stations are crude mixtures of different forms - perhaps because many of them are really samples of unimproved land races.

14. In this situation, breeders have been largely content to proceed by purifying their material and selecting improved forms from it. In this way, the workers at Bambe

have produced forms which combine improved yields with resistance to rosette disease and a degree of adaptation to dry conditions. Breeding programmes based on the conventional use of crossing (particularly between morphologically distinct sequential and alternate types) were started in the United States and South Africa as long as 40 years ago, and have more recently been undertaken in Senegal and Nigeria. Though they have led to important increases in yield Breeders have not identified or described the nature and inheritance of the components of larger yields, of resistance to disease, or of improved quality.

15. It will be necessary to establish at ICRISAT a world collection and register of varieties of tround-nuts, drawn from the existing collections in India, U.S. Department of Agriculture, North Carolina, Georgia, Florida and perhaps other States of the U.S., Argentina, Brazil, Peru, Senegal, Ivory Coast, Nigeria, Sudan, Tanzania, Zambia, Malawi, Rhodesia, South Africa, the USSR, Australia, Malaysia, Taiwan, Japan and the Phillipines. This should be extended by collection from China and Indonesia, both direct from official

sources and, as opportunity offers, by means of collecting expeditions in those countries. It will be essential to separate, register and classify the materials according to the generally accepted scheme of classification of varietal clusters (Gibbons, Smartt and Bunting 1972), supplemented by a standard vocabulary to record characters other than those already used to describe the variety clusters. The resulting data would then be coded in a manner compatible with the computer storage and retrieval system in plant genetic resources currently being developed in the Crop Ecology & Genetic Resources group in FAO. The Institute would also conserve (in low temperature storage) and regenerate the collection as needed, and ensure that the material was made available to plant breeders and other scientists, particularly in the countries of the semi-arid tropics. A duplicate of the collection or of parts of it, would be sent for long-term conservation to an appropriate centre.

16. During the past 20 years there has been established at North Carolina State University, Raleigh, N.C., a very wide range of wild materials of Arachis, including at least 70 species new to science, assembled by a series of collecting expeditions in South America. These vast

and unique materials have been studied in respect of morphology, characters of economic interest, and cross-compatibility, but the delimitation of the species leading to (i) formal taxonomic description, (ii) detailed cytotoxic and morphometric studies of relationships within and between the species, (iii) studies of the evolution of the genus, and (iv) evaluation of the wild forms and of their possible uses in plant breeding, though essential if the materials are to be useful to botanists and breeders, has not been completed. In this respect the genus Arachis stands where Triticum and Gossypium stood 60 and 50 years ago respectively. We have considered the various ways in which this might be done, and we have concluded that if ICRISAT takes responsibility for research on Arachis, this work should be associated with it and that a set of the materials from Raleigh should be established and maintained at ICRISAT. Where the detailed work should be done depends on how Professor Gregory wishes and is able to dispose of his time during the next few years, and on what can be done by cooperating institutions (e.g. the cooperative international programme at Reading to incorporate resistance to Cercospora leafspots from wild species to a tetraploid form which could be used by breeders), but we

feel sure that at the least groundnut workers at ICRISAT would not only find the wild materials instructive and useful but would also contribute significantly to the evaluation mentioned under (iv) above. Indeed, they might well wish to use the wild materials themselves for crop improvement.

17. If detailed work using the wild forms is to be done at ICRISAT a cytological and histological laboratory will be essential for studies of chromosome numbers and morphology, behaviour of chromosomes at meiosis, and other cytogenetic features. Much of the equipment would be similar to that required for advanced work in plant pathology.

18. The resources provided by the collection of wild and cultivated materials and the studies outlined above would permit rapid and, we believe, novel progress in plant breeding - partly at ICRISAT, in collaboration with breeders in the Indian national service, but largely in other cooperating countries of the semi-arid tropics. While breeders at ICRISAT will no doubt hope to produce locally - as well as more widely - adapted varieties of

this largely non-photoperiodic species, it is likely that their most important work will be to contribute breeders materials with advanced characteristics to national programmes producing varieties for particular specific localities of uses. At first, these varieties and materials will no doubt be based largely on selections; but before long materials derived from crosses (which may need cytogenetic monitoring) within Arachis hypogaea, and, later, materials drawn in part from wild species, will enter the lists.

19. This paragraph lists a number of general questions relating to the possible breeding programmes. It will be particularly important to examine in detail the structure of existing groundnut populations, in which a uniform appearance above ground may conceal a very wide range of variation in morphology and yield potential below. It will also be valuable to compare selections under advanced agronomic conditions to find out whether there are forms which respond (perhaps by producing more pods per reproductive node), to more favourable circumstances. It may prove valuable, in order to accelerate the breeding programme, to raise one generation a year

in the Eastern Mediterranean or the Southern Hemisphere.

If particular wild species or groups of wild forms appear to be valuable in breeding, further exploration may be needed to increase the variation available. In later stages, questions of seed technology and systems for multiplication, production and distribution will become important in many cooperating countries; and here ICRISAT may find it useful to cooperate, presumably through governments, with commercial plant breeding and seed producing and marketing firms. The genetical and breeding programmes, and in particular the use of the wild forms, will be greatly aided if it is possible to produce the complete series of 20 monosomics, much as Sears did 20 years ago in hexaploid wheat.

20. Those parts of the crop improvement programme which are concerned with exploration, collection, evaluation, recording, conservation and use of cultivated or wild forms of Arachis will be of great interest to the newly-formed International Board for Plant Genetic Resources, which will meet for the first time early in June 1974. The Board may be able, through the Consultative Group, to help the Institute to find additional funds for parts of this work.

RESEARCH RELATED TO CROP PROTECTION

21. Like plant breeding, many of the practical problems which crop protection research seeks to solve are locale-specific. The notes which follow are intended to concentrate on the characteristic role of an international institution whose primary task it is to cooperate with and support the national and local institutions which have to solve the locale-specific problems arising in these countries or districts.

Fungus Diseases

22. The most important diseases of groundnuts, world-wide are the leaf spots associated with two species of Cercospora, C.personata (Cercosporidium personatum) and C.arachidicola, in many experiments, yield has been increased by one-third or more by complete chemical control of these leafspots - a costly and troublesome procedure for small farmers. Worldwide, we estimate that these diseases lead to the loss of about 3 million tons of kernels per year. Even if the price were to fall to half the 1972-3 value of US \$ 375 per ton, this loss would be worth at least \$ 500 million. This indicates the potential value of the control of these diseases.

23. ICRISAT's work on them would include the collection of information, from all countries, on their incidence, ecology, variation and reproductive and population biology, the detection of races through the use of differential resistance series, the study of the infection and disease processes, and of the nature of resistance and immunity in cultivated and wild form. An international leafspot nursery would be essential. The pathologist would keep in touch with the testing of control chemicals and watch for the emergence of resistant races. He would also help to design the strategy of resistance breeding, which has already begun in the programme mentioned in paragraph 16, and would help to monitor its progress by screening progenies. Since at least two different wild sources of resistance could be used, we believe the programme is certain to succeed. Breeder's materials should be available within 5 years, and production varieties in 10-15. We estimate that this programme could eliminate, over time, the greater part, if not all, of the estimated world-wide losses of US \$ 0.5 billion annually associated with these diseases.

24. Other widespread fungus diseases are the stem rot associated with Sclerotium rolfsii and the crown rots associated with Aspergillus niger and (less commonly) Aspergillus flavus. Beyond keeping in touch with work on these diseases, and with the search for resistance in breeding programmes, it may not be necessary for ICRISAT to devote detailed attention to them, any more than to the seedbed rots, which are so readily controlled with cheap standard seed dressings. Peanut rust (Puccinia arachidis) at present largely excludes groundnuts from the Caribbean and threatens the crop in adjacent parts of the mainland of Central and South America, and in the Caspian region of Asia. Peanut crops outside the tropics may become infected by spores borne by wind from subtropical areas. Although chemical control has been recently reported resistance is known to exist in wild materials. ICRISAT could assist work on this disease in the Caribbean and Latin America through an international nursery including wild species and materials derived from them.

25. Aspergillus flavus: is a soil saprophyte which in addition to destroying seed in the seedbed can damage groundnuts in storage as a result of infection carried on the harvested pods and seeds. It also attacks many

20

other stored products. Some strains produce substances (the aflatoxins) which can harm or kill poultry and live-stock fed on the press cake from infected lots of groundnuts. Aflatoxins have produced liver cancers in experimental animals. Fortunately the oil from infected batches of groundnuts is free of aflatoxin. Improved harvesting and drying practices, and dry storage procedures, minimise spread, but no other effective control is known. However, the pigments of the tests of some varieties can delay the penetration of the fungus into the cotyledons, and so there may be some prospect of breeding resistant types. Once again, the wild forms may be particularly valuable. Some of them can remain dormant in the soil for very long periods without being attacked, which suggest that they may have resistance to A.flavus and to other soil organisms linked to or inherited separately from, their dormancy. This situation clearly calls urgently for examination.

Virus Diseases

26. Research at the East African Agriculture and Forestry Research Organisation (EAAFRO) at Nairobi, and in Malawi, has shown that the rosette virus complex, which is transmitted by Aphis craccivora and can cause very serious losses, particularly in late-sown crops in wetter areas, consists of several different entities. Several other virus

diseases have been reported from many parts of Africa and from other continents and countries including India. The peanut stunt virus of the United States appears to be distinct from part at least of the rosette complex. It is evidently important that the range of viruses should be more clearly characterised and distinguished from one another, and that their modes of transmission and biology in peanuts and alternate hosts should be established. We see no need at present for ICRISAT to develop virus studies at Hyderabad, but it might be able to help with the study of Indian viruses of peanuts, and it should be in touch with and support in any ways open to it the work in Kenya and Malawi. It will be particularly interested in seed transmitted viruses, which may well be important in peanuts, as they are in some other legumes.

27. At Bambe (by IRAT) and in Upper Volta (by IRHD) varieties have been selected which are satisfactorily resistant to rosette. Since infected aphids settle, feed and multiply on these varieties, the reasons for resistance are internal, but they have not been studied. ICRISAT should seek to ensure, if necessary, that this is done. Some of the wild species are said to be resistant to rosette, and here too the mechanism needs research.

At a later stage, when reliably Cercospora-resistant varieties are available, the breeders may find it appropriate to seek to add rosette resistance to them.

Insect pests

28. ICRISAT should be fully informed about the insect pests of peanuts, but since most of these are locale-specific no special programme is proposed other than observation and control on the Institute's fields. Co-operation with the British (ODM) Centre for Overseas Pest Research, would be valuable. It will, however, be essential to search for resistance to insect pests in both wild and cultivated materials in the genetic collections; some resistances have already been recorded.

Nematodes and other soil animals

29. So little is known about nematodes and annual crops in the tropics, although they seem to be widely distributed, that ICRISAT should either conduct or promote surveys throughout the semi-arid tropics to determine the kinds of nematodes which attack different crops, the size of the losses they cause, and the usefulness of cultural, chemical and other controls, including the use of hatching factor or its analogues in appropriate

cases. The roles of nematodes in transmitting viruses and in opening the way for invasion by fungi will surely not be forgotten in such surveys. Some wild forms are said to resist nematodes, and this may, therefore, if nematode losses are sufficiently serious, lead to a further breeding objective.

30. Most other soil animals seem to be essentially locale-specific, and ICRISAT may have few general contributions to offer. Termites, however, attack developing peanut pods in many parts of the semi-arid tropics, leading to direct loss, sprouting and the entry of insects and fungi including Aspergillus flavus. Termites have been controlled for more than one season by persistent insecticides, and this may be felt desirable at ICRISAT, but the economics of such methods, and their possible biological consequences, are not known. Possibly varieties or species of Arachis which are disliked in their mature stages by termites may be found - after all, termites seldom attack immature plants.

W e e d s

31. At this stage it seems unnecessary for ICRISAT to do much more about weeds and pesticides than cooperate with Governmental organizations (such as the ARC Weed Research Organisation at Kidlington, Oxford) and commercial firms,

to test selective pesticides on a range of a groundnut genetic materials. For the rest, weed problems tend to be locale-specific and must therefore be the primary responsibility of national organisations.

32. Hand weeding of groundnuts as pegs enter the soil and start to form pods may cause important losses of yield. Using an effective selective pesticide, or equipment with which paraquat can be sprayed safely between the rows, the size of these effects could be measured. Along with information on the alternative uses, and opportunity cost, of the time and labour saved by pesticides, a realistic evaluation of the economic value of pesticides to groundnut growers in the semi-arid tropics could be made.

Q U A R A N T I N E

33. The recommendations we have made in paragraphs 15 and 16 (to establish at ICRISAT a world variety collection, to extend this collection by exploration in China and Indonesia, to bring the world collection of wild materials to ICRISAT, and to extend it by further collection) will properly pose some serious quarantine problems for ICRISAT and the Government of India, since much of the collected material may not qualify for a plant health certificate

in its country of origin. We can do little more than draw attention to this problem. In a well-organised world, collection material would be grown out and certified in its country of origin, but if part of it could not pass muster, or if the collection numbers were lost or confused, such valuable material or information might be lost. Another possible alternative, the development of third-country quarantine facilities using bubble houses, in a country where peanuts are not grown commercially, may become attractive if the ultimate recipient countries are able to accept certificates issued from such a facility. Quarantine in the recipient country may not have the facilities to cope with the large numbers of introductions (maybe thousands in some years). An official quarantine station at ICRISAT may be feasible.

PRODUCTION METHODS

34. It will be necessary to do enough agronomic work at ICRISAT to grow bulk fields and experimental plantings of peanuts on both red and black soils as perfectly as possible. Beyond this, so much agronomic work (including soil research) is locale-specific that we wish to suggest a small number only of basic investigations, the results of which may be of general application.

35. Studies will be needed of seed technology - the storage of seed (including long-term storage for genetic conservation), preparation for sowing, and seed dressing. The role of dormancy in protecting seed at the end of the growing season, and the means of breaking it at sowing time if necessary, would both be of interest. Results obtained at Bambey concerning the role of the tests in inducing dormancy may provide a starting point.

36. Next, we see a need for factorial maximum-yield experiments in which all practices known, or expected, to increase yield are combined factorially, at 3 levels or more in appropriate cases. The treatment will be chosen from the results of the local programme suggested in paragraph 34, and of work at stations in India and elsewhere, together with the inspired guesses, and even the wild dreams, of the experimenters. The treatments will change from year to year as knowledge advances and new varieties come up for test. The object is to hold before staff and visitors alike the prospect of the largest yield the environment can be induced to sustain,, regardless of cost. Since the design will be factorial, so that all interactions are measured, it will be possible to extract from the results the range of practical combina-

tions which a real farmer could use in a particular situation. The information on responses and interactions would be at least qualitatively useful to cooperating research workers in other countries, who would be encouraged to join with ICRISAT in a world-wide coordinated network of trials of this sort.

37. From such experiments would be derived the advanced agronomic conditions mentioned in paragraph 19, under which varieties would be compared to find out whether any were particularly responsive to improved cultural methods. This would lead to comparative morphological and physiological studies to explain the differences, which would no doubt give further guidance to the breeders.

38. Once a small number of varieties of differing physiological behaviour has been identified (for example responsive and non-responsive forms of different morphological types (alternate and sequential bunch forms) the next step would be a series of comparative studies of the influence of the course of environmental factors during the season on the morphology and leaf and fruit growth of the crop, the canopy structure, the uptake and distribution of carbon and nitrogen, the reinvestment ratio,

the proportion of dry matter accumulated during a time interval which is used to form new leaves and other vegetative structures rather than deposited in seeds or other storage organs at different stages, and the redistribution of materials during the crop's life, particularly during fruit filling.

39. From this would develop an understanding of the quantitative relations between the weather and other time-variable environmental components during a season and the growth and yield of groundnut crops which could be combined into what it is fashionable (but nevertheless strictly correct) to call heuristic simulation models. These could then be applied to other environments, where they would be modified and improved. In the end they would provide for each locality a guide both to the breeders (since they would define the sort of plant most likely to succeed in say four years out of five) and to the agronomists, who would deduce from them, and test, possible ways of improving production methods. But another way, by describing in a quantitative way the general relation between environment, growth and yield, these models offer a bridge between the basic work at the international centre and the locale-specific work at national and local stations.

40. ICRISAT could also develop studies of water relations - the annual water regime, root growth and penetration, area of absorbing surface per unit volume of soil, water uptake, leaf physiology, stomatal behaviour and water loss, possibilities of breeding for adaptation to dry conditions by evading drought or through genuine biophysical drought tolerance or 'resistance'. Work of this sort will no doubt be central to ICRISAT's programme anyway; all we suggest is that groundnuts should share in it.

41. ICRISAT will no doubt wish also to develop a general activity on Rhizobium, in which groundnuts will receive their due share of attention. It will include such questions as possible specific adaptation of races of Rhizobium to Arachis and to particular species and varieties, the assembly and maintenance of a world collection of Rhizobium strains adapted to Arachis (associated in part with the exploration and collection work mentioned in paragraph 15, page 11), tests of effectiveness of strain-cultiver combinations, (perhaps using the reduction of acetylene to ethylene by nitrogenase, in young infected seedlings as a screen), variations in compatibility between Rhizobium strains and groundnuts on nitrogen-rich or nitrogen-enriched soils, the energetics of nitrogen fixation by Rhizobium-

Arachis to determine the metabolic energy cost of the nitrogen fixed, and the time course through the life of the crop of infection by Rhizobium and nitrogen fixation.

42. Studies of mechanization would start with a review of current practices among farmers in the semi-arid tropics, and would be associated with studies of labour requirements and constraints, in traditional rural communities. These studies would indicate whether, where and when an international research programme on engineering aspects of groundnut growing is needed.

POST HARVEST TECHNOLOGY

43. Much work in this field could be handed over to collaborating institutions in India or elsewhere (for example, the ODA Tropical Products Institute, London). However, the vast array of genetic material at ICRISAT, and the range of agronomic experience there and at co-operating institutions, suggest a particular study of the effects of genotype, agronomic practice and environment on the types and quantities of seed proteins, the content of lysine and sulphur-containing amino-acids, the trypsin inhibitors and other antimetabolites and toxins (especially in wild forms), and the quantity and fatty acid composition of the oil. All this would provide valuable guidance for the breeding and agronomy programmes.

PRICES, PROFITS AND PEOPLE

44. The groundnut group at ICRISAT will need to be continuously aware of the movements, world wide and in the countries of the semi-arid tropics, in production, trade, prices to farmers and consumers, and in uses together with forward prospects of the crop. The economist responsible for this continuous survey for other crops of the semi-arid tropics will surely be welcomed as a member of the groundnut group in which he will help in selecting the objectives and interpreting the results of the research programme.

PROFESSIONAL TRAINING AND OUTREACH

45. A central purpose of ICRISAT is to help the countries of the semi-arid tropics to improve their national agricultural research, planning, education and extension systems. Training people for these activities is an important part of ICRISAT's responsibility to the semi-arid tropics. In respect of groundnuts, the main needs seem to be for scientists for breeding, agronomy, crop protection and Rhizobium studies, of research technicians to help them, and of educators, advisers and extension workers.

46. All this, and indeed virtually everything else in this report, assumes vigorous and continuous collaboration with national agricultural research centres throughout the semi-arid tropics to plan and execute the locale-specific parts of the programme. The trainees referred to in paragraph 45 are vital links in this, and workshops, seminars, conferences, and scientific and popular publications will all be needed.

THE EVOLUTION OF THE PROGRAMME

47. We believe that all parts of the programme we have sketched are important, but they arrange themselves naturally in an order in time. First comes the transfer of a duplicate of the North Carolina collections of wild and cultivated forms and of as many duplicates as possible of national collections. This should start during 1974, for sowing in 1975 and 1976. During those seasons a senior groundnut scientist and a plant breeder should be at Hyderabad, and they will need the help of a plant pathologist, though not necessarily full time until 1976 or perhaps even 1977. The remaining work in crop protection could no doubt be done in 1975 and 1976 by entomologists and zoologists who have responsibilities for other crops, though a groundnut nematologist might be needed full-time in 1977. An agronomist (able later to handle the systems

modelling) will be needed in 1975 and a physiologist and an agroclimatologist should be available full or part time (shared with other projects) in 1976. The Rhizobium worker (no doubt shared with the chick pea and pigeon pea projects) should be available not later than 1976, and preferably even in 1975, when the first collections are established.

48. All this can be schematized as follows:/

1 9 7 4

PLANT BREEDING AND GENETICS:

Recruit project leader and senior scientific aide and start to assemble collections at ICRISAT; establish register; design screen house facility; specify additional needs for cytogenetic work; undertake visits and consultations in India, Nigeria, Senegal, Brazil (and perhaps Bolivia, Argentina, Peru, Ecuador, and Colombia), Mexico, U.S. and U.K.; make preparations for further accessions; review research literature including departmental reports from main groundnut areas of semi-arid tropics.

PRODUCTION STUDIES:

Recruit agronomist (systems).

1975

PLANT BREEDING AND GENETICS:

Recruit groundnut breeder and scientific aide; plant out, classify, filter and evaluate materials assembled in 1974; identify elite accessions and their characteristics; visit groundnut growing areas in India and perhaps Ceylon; assemble more materials; prepare visits to Indonesia, S.E.Asia, China, Japan; start compilation of monograph of genus Arachis; arrange for duplicate conservation of all materials where necessary.

PRODUCTION STUDIES:

Start maximum yield trials and crop growth studies, plus simpler agronomic trials to determine appropriate production practices for ICRISAT; recruit crop physiologist (or physiological agroclimatologist); order equipment and recruit Rhizobium specialist.

PROTECTION:

Recruit plant pathologist, who should visit Senegal, Nigeria and Nairobi, and scientific aide.

1 9 7 6

PLANT BREEDING AND GENETICS:

Visits and collection in India, Indonesia and South-east Asia; crossing programme including Cercospora - resistant breeding materials from Reading programme; testing of elite accessions; begin search for or production of monosomic lines; genetic and cytogenetic studies in wild species (not necessarily all at ICRISAT); (recruit cytogeneticist, with taxonomic interests, for evolutionary studies).

PRODUCTION STUDIES:

Continue general agronomy, maximum yield trials and crop growth studies; compare selections at normal and advanced agronomic levels; comparative (inter-varietal) studies of the morphology and growth of root system and their relation to the uptake of water and nutrients; start more detailed physiological and/or microclimatic growth studies, including work on balance sheets and distribution of nutrients and carbon on water balances and adaptation to dry conditions; extend maximum yield studies to cooperating centres; start development of heuristic models; recruit additional physiologist if the rate of growth of the programme warrants this, and start world-wide survey of Rhizobium adaptation.

PROTECTION:

Establish resistance series against Cercospora and elements of rosette complex; commence studies of nature of resistance to Cercospora and rosette; monitor breeding work on resistance; start international studies in Caribbean of peanut rust; recruit nematologist; begin studies of resistance to Aspergillus flavus.

49. The deployment of staff following the outline may be projected to 1979 as follows: /

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Project leader (a)	1	1	1	1	1
Plant Breeding and Genetics Group					
Groundnut breeder (a)		1	1	1	1
Scientists (b)	3	6	8	8	8
Scientific assts.(c)	15	30	40	60	80
Agronomy Group					
Agronomist (a)	1	1	1	1	1
Crop Physiologist (a)		1	1	1	1
Scientists (b)	3	7	8	8	8
Scientific assts.(c)	15	30	40	60	80

1975 1976 1977 1978 1979

Pathology (Subgroup of Central Pathology Group)

Scientist (b)	1	1	1	1
Scientific assts.(c)	5	10	10	10

Rhizobium (Subgroup of Central Rhizobium Group)

Scientist (b)	1	1	1	1
Scientific assts.(c)	5	10	10	10

Cytogenetics (Subgroup of Central Cytogenetics Group)

Scientist (b)	1	1	1
Scientific assts.(c)	2	6	10

Agroclimatology (Subgroup of Systems Group,
or added to agronomy)

Scientist (b)	1	1	1
Scientific assts.(c)	2	6	10

Nematology (Subgroup of Central Zoology Group)

Scientist (b)	1	1
Scientific assts.(c)	10	10

Totals:

International (a)	2	4	4	4	4
Scientists (b)	6	15	20	21	21
Scientific assts.(c)	30	70	104	162	210
TOTAL	38	89	128	187	235

In this table we have defined the categories of staff as follows:-

a) Highly qualified and experienced research workers of outstanding merit, able to lead and develop a programme over many years.

b) Competent, independent original research workers, able to direct the work of professionally-trained subordinates, and to develop their own programmes for at least a year at a time, under the general guidance of category (a) workers.

c) Professionally or technically qualified scientific assistants, able to take responsibility for the execution of research operations under the directions of category (b) workers.

50. The staff and operating costs of this programme are estimated as follows, in thousands of US dollars at constant prices based on rates and allowances used in ICRISAT's budget preparations:-

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Staff	136	291	350	433	500
Operation	18	70	80	85	100
Total	154	361	430	518	600

The capital costs of the program are estimated as follows
in 1974 in U.S.dollars terms:

Specific (Laboratories, Equipment)

- Plant Breeding	138,000
- Physiology	6,000
- Cytogenetics	56,000
- Pathology	68,000
- Nematology	44,000
	<hr/>
- Sub Total \$	312,000
	<hr/>

General

- Furniture, etc.	5,000
- Cars	32,000
- Pickup	21,000
- Miscellaneous	10,000
	<hr/>
- Sub Total \$	68,000
	<hr/>
TOTAL \$	<u>380,000</u>

Table 1
Comparative amino-acid composition of cereal grains and peanuts in % of protein

	Ideal for Human Nut	*** Sorghum (Cernum)	*** Corn	*** Wheat	Rice	** Peanuts
Lysine	4.3	3.1	2.7	2.5	3.4	3.0
Thresmine	3.3	3.6	3.6	2.5	3.4	2.6
Valine	2.8	4.2	4.7	2.9	6.2	4.4
Methionine	1.7	1.1	1.7	1.0	1.4	1.0
Isolencine	4.3	3.8	3.5	4.2	5.2	4.6
Leucine	4.9	12.7	12.4	6.6	8.2	6.7
Phenylalanine	2.9	4.6	5.0	4.9	5.2	5.1
Trystopane	1.1	59MH1.0	1.0	-	-	1.0
Half Cystine	-	" 1.0	1.6	4.0	1.2	0
Protein*	-	17.7	10.0	12.0	9.0	25-30

* Percent protein is highly variable dependent upon the conditions of sampling.

** Peanuts - culture and uses.

*** FAO - Improvement and Production of Maize, Sorghum and Millets.

Table 2

Relative Feed Value of Groundnut Haulms and Alfalfa (%)

	<u>Protein</u>	<u>Ether</u> <u>Extract</u>	<u>Crude</u> <u>Fiber</u>	<u>Non N</u> <u>Extract</u>	<u>Water</u>	<u>Ash</u>	<u>Total</u>
Groundnut	9.5	3.1	24.3	45.4	9.5	8.2	100.0
Alfalfa	14.7	11.9	28.5	37.4	9.1	8.4	100.0

Source: American Peanut Association, Peanuts - Culture and Uses - 1973.

Table 3

Semi-Arid Tropical Production of Groundnuts

Country or Region of Semi-Arid Tropics	A R E A ('000 ha.)				Y I E L D (Kg./ha.)				PRODUCTION (IN SHELL) ('000 tonnes)			
	61-65	1970	1971	1972	61-65	1970	1971	1972	61-65	1970	1971	1972
India	7226	7326	7240	6900	5710	834	789	652	5125	6110	5712	4500
Other Asian	1032	1252	1250	1217	893	845	1012	1037	922	1058	1265	1262
<u>Total: ASIA</u>	<u>8258</u>	<u>8578</u>	<u>8490</u>	<u>8117</u>	<u>732</u>	<u>836</u>	<u>822</u>	<u>710</u>	<u>6047</u>	<u>7168</u>	<u>6977</u>	<u>5762</u>
Nigeria	1845	1880	1834	1855	1010	819	593	665	1863	1540	1088	1233
Senegal	1059	983	1011	950	954	593	950	684	1010	583	960	650
Other African	1925	2325	2362	2377	760	705	762	757	1463	1638	1799	1799
<u>Total: AFRICAN</u>	<u>4829</u>	<u>5188</u>	<u>5207</u>	<u>5182</u>	<u>898</u>	<u>725</u>	<u>739</u>	<u>711</u>	<u>4336</u>	<u>3761</u>	<u>3847</u>	<u>3682</u>
Brazil	461	670	662	650	1323	1385	1350	1308	610	928	894	850
Argentina	291	211	310	294	1227	1114	1252	857	357	235	388	252
Other Central and South American	122	134	154	150	1139	1090	1149	1167	139	146	177	175
<u>Total: CENTRAL AND SOUTH AMERICAN</u>	<u>874</u>	<u>1015</u>	<u>1126</u>	<u>1094</u>	<u>1266</u>	<u>1290</u>	<u>1296</u>	<u>1167</u>	<u>1106</u>	<u>1309</u>	<u>1459</u>	<u>1277</u>
<u>Total: SEMI-ARID TROPICS:</u>	<u>13961</u>	<u>14780</u>	<u>14823</u>	<u>14393</u>	<u>823</u>	<u>841</u>	<u>826</u>	<u>731</u>	<u>11487</u>	<u>12434</u>	<u>12242</u>	<u>10521</u>
<u>TOTAL WORLD:</u>	<u>18338</u>	<u>19904</u>	<u>20040</u>	<u>19665</u>	<u>869</u>	<u>915</u>	<u>909</u>	<u>859</u>	<u>15937</u>	<u>18206</u>	<u>18211</u>	<u>16887</u>

Source: FAO Production Yearbook 1972, Rome, Italy.

Table 4

Semi-Arid Tropical Production of Food Legumes (1971)

('000 tonnes)

Region of Semi-Arid Tropics	LEGUME CROP					
	Dry Beans	Soybeans	Chickpeas	Cow peas	Pigeon peas	Groundnuts
A s i a	2265	1228	5770	10	1910	6977
Africa	613	65	205	1069	51	3847
Central and South America	3441	2227	173	-	26	1459
<u>TOTAL: Semi-Arid Tropics</u>	6319	3520	5948	1079	1987	12242
<u>TOTAL WORLD</u>	11073	48457	6594	1195	2024	18211

Source: FAO Production Yearbook 1972, Rome Italy.

Table 5
WORLD TRADE IN GROUNDNUTS (1970)

Country or Region of Semi-Arid Tropics	Groundnut Exports (\$ U.S. million)	Total Merchandise Exports (\$ U.S. million)	Quantity of Exports as percentage of production (%)
India	66.0	1958	11.1
Other Asian	5.7	3256	6.4
<u>Total: ASIA</u>	71.7	5214	10.4
Nigeria	109.0	1231	38.3
Senegal	74.0	152	68.6
Niger	17.0	n.a.	23.0
Sudan	16.0	294	7.1
Other African	11.2	2442	5.5
<u>Total: AFRICA</u>	227.0	4119	32.2
Brazil	38.0	2713	30.9
Argentina	18.0	1773	46.9
Other Central & S.American	2.1	214	15.3
<u>Total: CENTRAL AND SOUTH AMERICAN</u>	58.0	4700	32.0
Total: Semi-Arid Tropics	357.0	14033	19.1
TOTAL : WORLD	481.0	n.a.	n.a.



G7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72081, 72628

Laboratory : 38028

Farm : 39678

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-388

28 March 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Ad. Auriema, Inc.
One World Trade Center,
Suite 1829,
New York 10048.

Subject : Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs :

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organisations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and full assistance is being given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, tax-exempt, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the World, including three representing the Government of India.

Under the ICRISAT's agreement with the Government of India, no import licences are required nor does ICRISAT pay import duties. Some airconditioning equipment for our project is being ordered through Blue Star Limited, Bombay on ICRISAT's behalf for import into India by ICRISAT. ICRISAT has agreed to pay the complete c.i.f. cost of such equipment and materials in U.S. Dollars upon presentation of the required documents. Normally, ICRISAT pays all suppliers thru out the world against invoices and shipping documents. We hope that we can also handle the payment of the air conditioning materials or equipment being supplied by you in the same manner. We want to avoid issuance of letters of credit as such, as they will cause us some inconvenience and delays on this end and would increase our total costs.

If you would like to confirm ICRISAT's credit position, we would invite you to contact Mr. Michael LeJeune, Executive Secretary, Consultative Group on International Agricultural Research (CGIAR), World Bank, 1818 H.St. NW, Washington DC 20433, USA., Telephone (202) 477-3592, or Mrs. Joan R. Murray, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212) 883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

Page # 2

We would like to take this opportunity to remind you that all invoices should be made out in the name of the Director, ICRISAT, 1-11-256, Begumpet, Hyderabad : 500 016, A.P., India. Contrary to what Blue Star may have indicated to you along with their order to you, the Blue Star Order Number should not appear on any package nor should the name BLUE STAR appear on any invoices or on any shipping documents. It is imperative that these instructions be followed very strictly as we want to avoid any difficulties with Indian Customs and other Government formalities.

In closing, we would request that you allow us to pay you according to our normal procedures in order to avoid the additional cost and inconvenience of letters of credit. If you do have any questions, please feel free to contact us directly.

Sincerely

Ralph W. Cummings

Ralph W. Cummings
Director

cc: ~~Mr.~~ Michael LeJeune, World Bank, Washington DC.
✓ Mrs. Joan R. Murray, IIE., New York
Vastu Shilpa/J.A. Stein & Associates
Blue Star Limited, Secunderabad/New Delhi/Bombay
RV/OPS/KPN/ADL

ADL:ss



67

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72081, 72628

Laboratory : 38028

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 016-388

28 March 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Johnson Controls International Inc.
P.O. Box 755, 507, East Michigan St.,
Wisconsin 53201,
U. S. A.

Subject : Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs :

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organisations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and full assistance is being given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, tax-exempt, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the World, including three representing the Government of India.

Under the ICRISAT's agreement with the Government of India, no import licences are required nor does ICRISAT pay import duties. Some airconditioning equipment for our project is being ordered through Blue Star Limited, Bombay on ICRISAT's behalf for import into India by ICRISAT. ICRISAT has agreed to pay the complete c.i.f. cost of such equipment and materials in U.S. Dollars upon presentation of the required documents. Normally, ICRISAT pays all suppliers thru out the world against invoices and shipping documents. We hope that we can also handle the payment of the air conditioning materials or equipment being supplied by you in the same manner. We want to avoid issuance of letters of credit as such, as they will cause us some inconvenience and delays on this end and would increase our total costs.

If you would like to confirm ICRISAT's credit position, we would invite you to contact Mr. Michael LeJeune, Executive Secretary, Consultative Group on International Agricultural Research (CGIAR), World Bank, 1818 H.St. NW, Washington DC 20433, USA., Telephone (202) 477-3592, or Mrs. Joan R. Murray, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212) 883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phone: City Office: 75081, 75028
Laboratory: 75028
Fax: 75078
Cable: ICRISAT, SECUNDERABAD
Telex: ICRISAT 018-380

CITY OFFICE:
1-11-208, Begumpet,
Hyderabad-500016, A.P., India

28 March 1975

Johnson Controls International Inc.
P.O. Box 752, 507, East Michigan St.,
Waukegan 53201,
U. S. A.

Subject: Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Elue Star Limited, Bombay, India.

Dear Sirs:

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organizations including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Government of Madhya Pradesh. It has the highest level and full assistance in its establishment and operation given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the world, including those representing the Government of India.

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If you would like to confirm ICRISAT's position, we would invite you to contact Mr. Harold Graves, Executive Director, Consultative Group on International Agricultural Research (CGIAR), Washington DC 20043, USA, Telephone (202) 455-5000, or Mr. John R. Murty, Institute of International Nutrition, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212) 883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

RECEIVED
1975 APR -8 PM 3:51
INCOMING MAIL UNIT

Page # 2

We would like to take this opportunity to remind you that all invoices should be made out in the name of the Director, ICRISAT, 1-11-256, Begumpet, Hyderabad : 500 016, A.P., India. Contrary to what Blue Star may have indicated to you along with their order to you, the Blue Star Order Number should not appear on any package nor should the name BLUE STAR appear on any invoices or on any shipping documents. It is imperative that these instructions be followed very strictly as we want to avoid any difficulties with Indian Customs and other Government formalities.

In closing, we would request that you allow us to pay you according to our normal procedures in order to avoid the additional cost and inconvenience of letters of credit. If you do have any questions, please feel free to contact us directly.

Sincerely

Ralph W. Cummings

Ralph W. Cummings
Director

cc: ☒ Mr. Michael LeJeune, World Bank, Washington DC.
☒ Mrs. Joan R. Murray, IIE., New York
Vantu Shilpa/J.A. Stein & Associates
Blue Star Limited, Secunderabad/New Delhi/Bombay
RV/OPS/KPN/ADL

ADL:ss



G7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

March 28, 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Dr. Bruce M. Cheek
Deputy Executive Secretary
Consultative Group on International
Agricultural Research
1818 H. Street, N.W.
Washington, D.C. 20433.

Dear Dr. Cheek:

I wish to thank you for your letter of 14th March 1975 addressed to Dr.R.W. Cummings. We are really grateful to you for giving favourable consideration to the suggestions made by Dr. Cummings regarding environmental aspects of agricultural research and production as related to ICRISAT's program.

Mr. John Coulter also visited ICRISAT. He may have got new ideas which I am quite sure he would discuss with you. We understand that it will not be possible to give equal weightage to the proposals from all the institutions but we do hope that ICRISAT will receive special consideration because of its mandate for the most difficult problem areas of the semi-arid tropics.



With best regards,

Yours sincerely



J.S. Kanwar
Associate Director

WORLD BANK GROUP

ROUTING SLIP		DATE
NAME		ROOM NO.
MR. M.L. LEJEUNE		E-1039
		
APPROPRIATE DISPOSITION	NOTE AND RETURN	
APPROVAL	NOTE AND SEND ON	
COMMENT	PER OUR CONVERSATION	
FOR ACTION	PER YOUR REQUEST	
INFORMATION	PREPARE REPLY	
INITIAL	RECOMMENDATION	
NOTE AND FILE	SIGNATURE	
REMARKS		
		
FROM	ROOM NO.	EXTENSION
FRANK DOVEY	F-302	2143

INCOMING CABLE

✓G-7

cc: G-4

INTBAFRAD WSH

TLXAO82 WAAO90(1152)(1-015500D086-001)PD 03/27/75 1047

ICS IPMWAWA WSH

MAR 28 RECD

SUSPECTED DUPLICATE: 1-100529G086 WAC 067 ICS IPMIIHA IISS

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PMS WASH DC

March 27, 1975

Distribution:

Mr. Danry

Mr. Povey

BT

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UWNX BY NGLS 047

LAGOS 47/43 28 0911

ETATPRIORITY PRIORITY

EXECUTIVE SECRETARY CONSULTATIVE GROUP INTBAFRD

WASHINGTONUSA

SNR.133/8.5/693 STOP YOURWET OF MARCH 7TH 1975 STOP

NIGERIA HAS NO OBJECT ION TO THE RE-ELECTIONS TO THE

BOARD OF ICRI SAT OF DR RALPH MELMILLE AD TO THE

BOARD OF CIP OF DR BORGE JACOBSEN

FRANK PERMSEARCH

F-300 21/3

INCOMING CABLE

~~Mo. J. ...~~
G 7

INTBAFRAD WSH

TLXA082 WAA090(1152)(1-015500D086-001)PD 03/27/75 1047 MAR 27 PM 11 30

ICS IPMWAWA WSH

SUSPECTED DUPLICATE: 1-1005296086 WAC 067 ICS IPMIIHA IISS

IISS FM WUI 27 1047

PMS WASH DC

March 27, 1975

Distribution:

Mr. Darry

Mr. Povey

BT

UWC4787 LNL824 OMZ005X LWA679 MA8553

UWNX BY NGLS 047

LAGOS 47/43 28 0911

ETATPRIORITE PRIORITY

EXECUTIVE SECRETARY CONSULTATIVE GROUP INTBAFRD

WASHINGTONUSA

SNR.133/S.5/693 STOP YOURWET OF MARCH 7TH 1975 STOP

NIGERIA HAS NO OBJECT JON TO THE RE-ELECTIONS TO THE

BOARD OF ICRISAT OF DR RALPH MELMILLE AD TO THE

BOARD OF CIP OF DR BERGE JACOBSEN

PERMSEARCH

Mr. Michael L. Lejeune

March 24, 1975

Harold Graves

ICRISAT: Capital budget estimates

While most of the points have been covered in discussions with Mike Ruddy, it may nevertheless be useful to have in files a comparison of ICRISAT's "reduced" capital plan of 1975 with what the Secretariat in 1974 estimated that plan would cost. A comparative table is attached.

In 1973, ICRISAT had drawn up a table of expenditures on its capital plan which in that year a Secretariat mission (Messrs. Evans and Urquhart) warned might be substantially exceeded because of inflation. In 1974, after a visit to ICRISAT by Kin Maung Thint, the Secretariat concluded that the ICRISAT estimates were unrealistic, and drew up its own estimate, based on the ICRISAT 1973 table of expenditures and using the World Bank formulas for physical and price contingencies. This estimate amounted to something over \$19 million for the years 1974-77.

Following a meeting of donors in April 1974, ICRISAT returned to its architects and its Governing Board for a series of discussions directed to the reduction of its capital plan. The result, as set out in Ralph Cummings's letter of January 21 to Messrs. Baum and Lejeune, is a plan estimated to cost \$20.75 million -- \$1.5 million more than the Secretariat estimate of the plan which the ICRISAT management and Board set out to reduce.

The principal points of comparison, as shown in the attached table, are that

1. The costs of construction are, indeed, reduced by about \$1.2 million.
2. The estimated cost of equipment rises from \$3.6 million in the Secretariat projection to \$4 million in the Secretariat estimate, even though the Secretariat estimate for equipment, based on ICRISAT's 1973 classification of expenditures, included the cost of furniture and the ICRISAT estimate of 1975 does not.
3. The "Other" category, including architects' fees of about \$0.5 million, rises from \$0.9 million to \$3.2 million. The category, as estimated by ICRISAT, includes items which were not included in the Secretariat estimate of the category: particularly, furniture (which the Secretariat included in equipment, as did ICRISAT in its 1973

Mr. Michael L. Lejeune

- 2 -

March 24, 1975

table of expenditures) and contingencies, which the Secretariat built into its estimates of construction and equipment costs.

4. ICRISAT's 1975 estimates for equipment and "other" amount to \$7.2 million, or over one-third of the total. No itemization is given for either category.

Attachment

HG:apm

cc: Mr. Ritchie
Mr. Coulter
Mr. Griffith
Mr. Lewis

	<u>1973</u> ^{a/}	<u>1975</u> ^{b/}	Change
Construction, site and campus development	10,060		
Physical contingencies	1,006		
Price contingencies	3,541		
Reduced in 1974 budget	<u>140</u>		
Total construction, etc.	14,747	13,526	- 1,221
Equipment, including furniture	3,642	Equipment sans furniture 4,000	+ 358
Other		Other	
Architects		Architects	
Consultants		Supervision	
Interior decoration		Furniture	
Landscaping		Interior dec.	
		Landscaping	
		Consultants	
		Contingencies	
Total other	<u>205</u>	<u>3,224</u>	+ <u>2,319</u>
TOTAL CAPITAL BUDGET	19,294	20,750	+ 1,456

a/ Secretariat projection of April 1974

b/ ICRISAT estimate of January 1975

March 21, 1975

Standard Elektrik Lorenz Aktiengesellschaft
Box 40 07 49,
D-7000 Stuttgart 40,
Germany

Gentlemen:

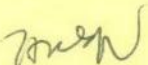
This is in response to your letter of March 11 (Ref. ZF/EXFI-S/MI, concerning an order placed with you for one Crossbar Grosscitomat by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) of Hyderabad, India. ICRISAT certainly has plenty of funds from which to pay for this order. The payment will be made out of ICRISAT funds, however, and not out of funds of the World Bank.

ICRISAT is one of several international agricultural research centers whose financial needs from year to year are being met by appropriations from the Consultative Group for International Agricultural Research, of which the World Bank is the Chairman. With respect to 1975, 13 governments and international organizations of the Group have agreed to provide funds to ICRISAT. These 13 are Australia, Belgium, Canada, the Federal Republic of Germany, the International Development Research Centre (of Ottawa), the Netherlands, Nigeria, Norway, Sweden, Switzerland, the United Kingdom, the United Nations Development Programme, and the United Nations Environment Programme. These thirteen donors have agreed to provide ICRISAT with currencies totaling the equivalent of more than \$8,000,000 in 1975 and with an equal amount in 1976.

ICRISAT maintains its own bank accounts in the United States and India. I have no doubt it will be able to respond to your letter through its own banking arrangements, and I have forwarded your letter to ICRISAT for attention there.

Sincerely yours,

Harold N. Graves


HNGraves:amn

cc: Files G-7

Dr. Ralph W. Cummings, Hyderabad, India



files: G-7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : 72091, 72628
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-366

CITY OFFICE:
1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

Mr. Michael LeJeune
Executive Secretary
CGIAR
1818 H. Street, N.W.
Washington, D.C. 20433

March 17, 1975

Dear Mr. LeJeune,

We had a very helpful visit from Mike Ruddy and John Coulter during the week of March 10, during which we reviewed the budget outlook for ICRISAT, with special reference to financing problems for capital construction and development. This inevitably included discussion also of our projections on core operating costs over the next three years. I am sure they will report their own observations to you upon their return.

These discussions, in addition to our attention to several other groups to ICRISAT whose visits were arranged recently, occupied our time rather fully during the week and did not permit as much attention to shaping up the 1976 draft program and budget document as we had planned. For some time, I have had a schedule during the third and fourth week of March for discussions in West Africa of our projected program in that region which involves meshing schedules with many other people and which I cannot change at this date. We have put together our basic guidelines for this program and budget document and I am leaving it in the hands of our Associate Director, Dr. J.S. Kanwar, along with our fiscal officer and others, to put the document together and forward it to you, hopefully to reach you by the specified date.

We completed our first internal program review on March 10, and found this an extremely useful exercise. We wish to follow this up and incorporate a number of changes with respect to detailed budget allocations and responsibilities which will take a substantial amount of time and individual discussions with our various program leaders. This will not affect substantially our total budget requirements. We shall probably make a number of changes in the exact way this is put together between now and the time of the meeting of our Executive Committee, May 22-24, when our 1976 Program and Budget document will be given final shape.

I trust that the draft document will provide the Secretariat with the basic information required at this stage and that our making subsequent changes within the totals before finalizing the document will present no problems from your point of view.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

RWC:jg

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



Phones : 72087, 72828
Cables : CRISAT, SECUNDERABAD.
Telex : ICRISAT 018-386

CITY OFFICE:
7-11-288, Begumpet,
Hyderabad-500016, A. P., India.

March 17, 1975

Mr. Michael Lelonne
Executive Secretary
CGIAR
1818 H. Street, N.W.
Washington, D.C. 20433

Dear Mr. Lelonne,

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I trust that the document will provide the Secretariat with the basic information required at this stage and that our making subsequent changes within the limits before finalizing the document will present no problems from your point of view.

Very truly yours

Ralph W. Cummings
Director

RECEIVED

RWC:jg

P.S.

I have just sent you a cable enquiring if there would be any problem in deferring for one week the submission of this draft budget document to enable me to review it upon my return from Africa. We will abide by your decision.

RWCumby
RWC

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: MARCH 17, 1975

CLASS OF

SERVICE:

~~TELEX 015-366~~

LT/RCA
Ext. 3592

COUNTRY: INDIA

TEXT:

Cable No.: RECEIPT BY SECRETARIAT OF ICRISATS PROGRAM AND BUDGET PAPER APRIL SEVEN

AGREED REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

MLLejeune:ia

cc: Mr. Gavino
Files G-7

For Use By Communications Section

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

INTERNATIONAL FINANCE
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

TO: CUNNING
ORISAT
SYNDICATE

DATE:

MARCH 17, 1975

CLASS OF

SERVICE

TELETYPE

COUNTRY: INDIA

RECEIPT BY SECRETARIAT OF ICRI'S PROGRAM AND BUDGET PAPER APRIL SEVEN
Cable No.

AGREED REGARDS

LEJUN

NOT TO BE TRANSMITTED

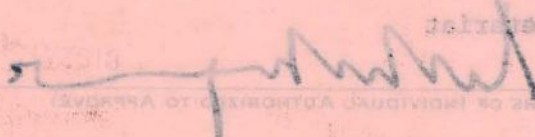
CLEARANCES AND COPY DISTRIBUTION

Michael L. Lejune

cc: Mr. Gavino
Files 6-7

NAME: Michael L. Lejune

DEPT: COIAR Secretariat



SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

REFERENCE

ORIGINAL FILE COPY

IMPORTANT: See Secretary's Guide for proper filing

Classified for Disposal

Mr. Daniel Ritchie

6-1
CC 6-4
✓ 6-7
March 11, 1975

Michael L. Lajeune (signed) Michael L. Lajeune

CGIAR Nominations to Center Boards

1. Some Centers - I don't know how many, but certainly CIP and ICRISAT are among them - have constitutional requirements that a certain number of trustees shall be named by the CGIAR. Mr. Graves is doing a note on this (See my memorandum to him of January 9. Also see Bruce Chaek's memorandum. Both are attached.)

2. This subject should be taken up at the Co-Sponsors meeting at Centers Week and we should have a paper ready by then recommending how to deal with what appears to me to be an unclear concept. We must allocate responsibility for preparing the paper. Please set up a timetable for it. We can then discuss who should be responsible.

Attachments

cc: Messrs. Graves
Coulter o/r
Gavino

MLLajeune:la

File C-1
cc:G-4/G-7



Hellmuth-Hirth-Straße 42
D-7000 Stuttgart 40 (Zuffenhausen)
Germany
Telephone (07 11) 8 21-1
Telegram: stanlor stuttgart
Telex 7 211-0

Standard Elektrik Lorenz AG · Box 40 07 49, D-7000 Stuttgart 40, Germany

By Air-Mail!

Mr. Harold Graves
Executive Secretary,
Consultative Group of International
Agricultural Research,
World Bank

1818, H Street, NW

Washington D.C. 20433/ USA

Your ref.

Your letter of

Our ref.

ZF/EXFI-S/M1

Telephone

(07 11) 8 21- 2542

Telex

7 211-215

Date

March 11, 1975

Subject: International Crops Research Institute for the Semi-Acid Tropics (ICRISAT),
Hyderabad, India
Our offer for one Crossbar Grosscitomat, value approx. DM 140.000,--

Dear Sir,

An offer for one Crossbar Grosscitomat was sent by us to the above mentioned institute, who informed us in the meantime that, in case we should be favoured with an order, payment would be effected out of World Bank funds. Your address having been given to us as reference, we should like to ask you to kindly confirm this settlement.

According to payment conditions stipulated in our offer, payment is requested in DM out of an Irrevocable Letter of Credit, payable in West Germany pro rata delivery against shipping documents. It is supposed that these terms are in accordance with the regulations for this kind of transactions. We would appreciate your comments on this subject.

Thanking you in anticipation for your reply, we remain, Dear Sir,

Sincerely yours,

STANDARD ELEKTRIK LORENZ AG
Central Export Finance Dept.

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1975 MAR 11 10:08
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Dr. Jürgen Rottgardt, Burkhard Wiesmann. Deputy Members: Dr. Hansgeorg Kanno,
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Mr. Lejeune ✓

SECUNDERABAD 71/70 10 1302 PAGE 1/50

cc: Gwen
Savino
3/11

INTBAFRAD

WASHINGTON DC (USA)

LEJEUNE REURCAB MARCHFIVE 1976 DRAFT PROGRAM AND BUDGET UNDER
PREPARATION TO BE SENT PRIOR APRIL ONE STOP EXECUTIVE COMMITTEE
WILL TAKE ACTION MAY TWENTYSECOND THRU TWENTYFOUR STOP AUDITORS
HAVE COMPLETED 1974 EXAMINATION AND REPOGTS EXPECTED READY FOR
CIRCULATION WILL IN ADVANCE APRIL ONE STOP ICRISAT

~~60L 1976 1974~~

~~BS263/10 PAGE 2/20~~

PROGRAMME WILL PROJECT EXTENSION OF ACTIVITIES ALREADY OUTLINED
1975 PRESENTATION WITH NO NEW MAJOR INTITATIVES STOP REGARDS

CUMMINGS CRISAT SECUNDERABAD

AS RECEIVED

OFFICE MEMORANDUM

6-7

TO: Files

DATE: March 10, 1975

FROM: Michael L. Lejeune

SUBJECT: ICRISAT

1. On the eve of Mr. Ruddy's departure for ICRISAT, he, Mr. Graves and I met with Mr. Baum for a brief review of the question of the \$33 million commitment ceiling for the period 1974/77. For discussion purposes we used the attached rough estimate of the situation. We recognized that categorizing some items as "not deferrable" and others as "deferrable" was a difficult judgment to make on the incomplete data available, and therefore these figures were not very reliable.

2. It was agreed that any decision on lifting the ceiling should await the findings of Mr. Ruddy and Mr. Coulter following their present mission. Any rise in the ceiling would have to be thoroughly justified by ICRISAT and they should be discouraged from embarking on capital investment which could be deferred without significant damage to the carrying out of their program. The possibility of some rise in the ceiling need not be precluded but given the likely financial commitments of the CGIAR System as a whole in 1976 and 1977, in a period of rising costs and development of new Centers, no rise could be sanctioned which was not fully justified and even then could not be large. The feasibility of financing higher costs would be increased to the extent that ICRISAT's capital development program could be stretched out beyond the period 1974/77.

3. We also briefly discussed the question of "bridging finance". The consensus was that the chances of getting the Management of the Bank to approve an IDA Credit for this purpose were significantly less today than previously.

Attachment

cc: Mr. W. C. Baum
Mr. H. N. Graves
Mr. D. Ritchie
Mr. J. K. Coulter
Mr. W. W. Lewis
Mr. M. E. Ruddy
Files G-7



MLLejeune:amn

Estimates of ICRISAT Expenditures

(\$ million)

	Capital	Core	Total
CG Limit	17.35	15.65	33.00
Present ICRISAT Estimates	20.75	(15.65)	36.40
Of which			
Spent	2.00+		
Construction contracted	<u>9.49</u>		
	11.49		
Construction not yet contracted	3.22		
Other (including equipment)	6.04		
Capital Expenditure not deferrable	18.43		
Capital Expenditure Possibly deferrable	2.32		
Add Groundnut Program	0.58	0.94	1.52
Floor Expenditure	19.01	16.59	35.60

6-7
March 6, 1975

Dr. Ralph W. Cummings
Director
International Crops Research Institute
for the Semi-Arid Tropics
1-11-256, Bagumpet
Hyderabad-500016, A.P.
INDIA

Dear Dr. Cummings:

I was sorry to miss you when you were here last month, but I had a full report from Harold Graves, Bruce Cheek and the others with whom you spoke. Your visit was very useful and will help us to respond definitively to your letter of January 21.

Mr. Ruddy left today for Hyderabad where he and Dr. Coulter together will be reviewing the ICRISAT program and budget and will be collecting the information necessary to provide the donors on the question you have raised about lifting the \$33 million ceiling on commitments during 1974-77. Michael Ruddy and John Coulter are going on to IRRI, but as soon as they get back we shall get the question settled.

While I was in London, I met with Will Mathieson and learned from him ODM's views and the possibility that they might be able to offer some extra money for your construction program. If the donors collectively conclude that the ceiling should be lifted, we in the Secretariat will do all we can to help find the extra money.

You raise, in the last paragraph of your letter, the question of bridging finance. I hope none will be necessary because I think it will be hard to find. I know that the possibility of borrowing from IDA has been discussed in the past, but you will be aware that the World Bank Group is having a lot of difficulty raising concessionary funds on the scale necessary to meet the needs of hard-pressed undeveloped countries. Any request to IDA for bridging finance will have to be viewed in this new context.

I shall be writing to you again on all these matters in the early days of April.

Best wishes,

Yours sincerely,

Michael L. Lejeune
Executive Secretary

cc: Messrs. Graves, Ritchie, Ruddy.

File G-7

MLLejeune:ia

Mr. Ruddy, Programming & Budgeting

March 3, 1975

Harold Graves, EGIAR Secretariat *HG*

ICRISAT Capital Budget - Equipment

We talked this morning about the fact that ICRISAT's latest estimates for equipment amount to \$4 million, as against \$3 million estimated in the second half of 1973. If we estimate that the cost of equipment (most of which is imported) is rising by about 12 per cent annually, then this higher figure can be defended.

We should confirm, however, that the estimates include the cost of freight. This item has frequently been omitted in Center estimates in the past, and commonly amounts to as much as 25 per cent of total equipment costs.

HGraves/ms/G7

OFFICE MEMORANDUM

F244
G7

TO: Mr. Bruce M. Cheek

DATE: February 24, 1975

FROM: David H. Lewis

SUBJECT: International Crops Research for the Semi-Arid Tropics (ICRISAT)
Construction on Basis of New Tenders
Meeting with Dr. Ralph Cummings - February 19, 1975

The following records the discussion of the construction-related aspects of the ICRISAT proposals to proceed with the award of building contracts for priority requirements on the basis of the tenders received for revised drawings and specifications, which took place during our meeting with Dr. Ralph Cummings on February 19, 1975:

1. Dr. Cummings indicated that in terms of content, or facilities provided for, the revised plans used in obtaining the new bids are essentially similar to the original schematic drawings reviewed by Messrs. Thint and Shadden last year, and that they may represent some reduction of the 505,000 sq. ft. overall construction area of the original drawings since a number of ancillary features have been eliminated or trimmed in the process of revision.
2. He confirmed that the design modifications and lowered specifications incorporated in the revised plans reflect consideration of all the technical points which Mr. Shadden had raised with Mr. Bentley in Washington last April - as recorded by Mr. Bentley in his letter of June 19, 1974.
3. Dr. Cummings also confirmed that the base construction cost figures listed in the budgetary estimate attached to his letter of January 21, 1975, cover not only the amounts of the lowest evaluated bids received for each of the building groups to be separately contracted, but also the value of the construction materials which ICRISAT have already procured in bulk and will supply to the contractors.
4. He explained that the allowance for architects' fees included in the additional general costs (\$3,224,000) of 30% added to the overall base construction cost (\$13,526,000) in his budgetary estimate is equivalent to only 5.95% of total construction cost and, as such, reflects a negotiated reduction of the original 7% fee. Under the reduced fee, the consultant architects have agreed to provide site supervision services limited to the periodic visits necessary to ensure design integrity and correct interpretation of their drawings. ICRISAT will assume direct responsibility for day-to-day routine site supervision of construction processes, and technical staff have been engaged for this purpose.
5. A discussion of the factors considered in determining an appropriate contingency allowance revealed: (a) that foundation and other structural details in the construction drawings used for obtaining the new bids had been based on the findings of extensive site investigations including complete bearing tests and (b) that - under the terms of the fluctuation clauses which will be incorporated in the building contract agreements - the contracted building costs will increase only when, and if, the Government officially increases minimum wage scales or the controlled prices for such basic materials as cement and reinforcing steel, (and not simply whenever market

prices change). Furthermore, the possibility of any cost increases for the latter reason will be limited by the fact that ICRISAT has already purchased practically all the reinforcing steel needed, as well as substantial quantities of the electric cabling, piping, roof sheeting, insulation materials, windows and other construction materials required. Under these circumstances, in addition to the basic fact that bids have been obtained, the limitation of the contingency allowance included in the residual "additional general cost" provisions in Dr. Cummings' budgetary estimate to an amount equivalent to only 10% of base construction costs (i.e., the sum of lowest evaluated bids and the value of owner purchased materials) appears reasonable.

6. Dr. Cummings said that possible cost escalation and other contingencies had been carefully considered in determining the recurrent or operating expenditure estimate of \$15.65 million used in his budgetary calculations.

7. In accordance with the above, the estimated cost of establishing and operating all the facilities required is re-cast as follows:

(a) Capital costs:

(i) Construction	
- Base cost (Dr. Cummings' estimate):	\$13,526,000
- Architects' fees (5.95% of construction):	\$ 804,800
	<u>\$14,330,800</u>
- Contingencies (10% of base cost + fees):	\$ 1,433,100
	<u>\$15,763,900</u>
(ii) Furniture	
- Base cost (10% of building works):	\$ 1,352,600
- Contingencies (10% of base cost):	\$ 135,300
	<u>\$ 1,487,900</u>
(iii) Equipment - including contingencies:	\$ 4,000,000
Total capital costs:	\$21,251,800
or say:	<u>\$21,250,000</u>
(Dr. Cummings' estimate:	\$20,750,000)

(b) Operating (recurrent) expenditures 1974-77

(Dr. Cummings' figure):	<u>\$15,650,000</u>
Total capital & operational costs:	<u>\$36,900,000</u>
Ceiling imposed by Consultative Group:	<u>\$33,000,000</u>
Short fall	\$ 3,900,000
(Dr. Cummings' figure:	\$ 3,500,000)

8. The estimated cost of establishing and operating, as an initial phase, the priority facilities listed as items 1-15 in the attachment to Dr. Cummings' letter of January 21, 1975 is accordingly:

(a) Capital costs:

(i) Construction

- Base cost (Dr. Cumings' estimate):	\$10,384,098
- Architects' fees (5.95% of construction):	\$ 617,854
or say:	<u>\$ 617,902</u>
	\$11,002,000
- Contingencies (10% of base cost + fees):	<u>\$ 1,100,200</u>
	\$12,102,200

(ii) Furniture

- Base cost (10% of construction):	\$ 1,038,410
- Contingencies (10% of base cost):	<u>\$ 103,840</u>
	\$ 1,142,250

(iii) Equipment - including contingencies
(Assumed as for total facilities):

\$ 4,000,000

Total capital costs:

\$17,244,450

or say:

\$17,245,000

(b) Operating (recurrent) expenditures 1974-1977

(Assumed the same as for total facilities): \$15,650,000

Total capital & operational costs:

\$32,895,000

- which is within the ceiling presently imposed
by the Consultative Group, i.e:

\$33,000,000

9. In view of the indications that the economies in planning and standards previously suggested by the Bank are substantially provided for by the revised drawings and documents used for the new tender and that the bids received on this second occasion are considered of an acceptable level (being also 25% below those obtained in the initial tender exercise last July), it appears reasonable to proceed with an award of contracts for the 15 priority items, as a first phase, before the validity of the bids expires and construction costs rise any higher.

cc: Messrs. Ballantine, Graves, Ruddy

DHLewis:mb

Mr. Michael L. Lajeune, CGIAR Secretariat

February 24, 1975

Bruce M. Cheek, CGIAR Secretariat

ICRISAT - Discussion with Cummings on Construction Tenders

1. The Director of ICRISAT, Dr. Ralph Cummings, was in the Bank on February 19. He was in Washington for a Soils and Water Conference. Following his letter of January 21, 1975 we had cabled him on February 3 regarding his desire to award some \$10.-12 million of contracts in the near future, the building priorities he was setting, and his request to be allowed to raise, with CGIAR Secretariat help, additional funds which would take ICRISAT ~~beyond~~ the \$33 million capital and operating ceiling set for 1974-77 at the April 1974 meeting of ICRISAT donors.
2. In fact, Cummings did not receive our full cable until he reached Washington and the interim replies from his subordinates were quite unsatisfactory. Cummings said he had no time to stay over to see you and Baum as he wished to be back in ICRISAT on 2/25 to award the contracts on that day, the day the validity of bids expired.
3. David Lewis of Education Projects, Michael Ruddy of East Asia and I spent two hours with Cummings and he later lunched with Hardad Graves. On the basis of discussions reported below, we decided not to press him to stay the extra 3/4 days in Washington and we also agreed to the award of the construction bids.
4. Award of initial contracts as described in Items 2-15 of his letter. Apart from the \$750,000 air-conditioning contract, none had been awarded as of 2/19. We reviewed the package which really consists of some seven units for which there are 3 proposed awards. Questioning by Lewis led us to conclude that due notice had been taken of the Bank's queries on specifications for floors, external plaming (pools etc.), ceilings, railings etc. The 25% reduction in bid costs was also noticed - a result partly of specifications changes, but mostly of the re-bidding in smaller packages. It was noted that the contracts for housing included in the first 16 items were not the subject of the current bid deadline, but would come up in March. There was therefore still scope for reviewing the housing policy question. Cummings said that they planned 50% on-site housing for senior staff plus necessary support staff housing (security, maintenance, crop protection). Only half of the 50% was included in the March proposals (some 10 houses) with another 10/12 in the second priority list, items 16-23, which were the items which could be financed only by spreading the capital plan beyond 1977 or allowing/helping ICRISAT to mobilize some \$3-4 million extra capital funds in 1975.
5. Lewis questioned Cummings on the contingencies and inflation allowances. He is doing a separate note on his judgments. The margin of error and escalation was reduced by (a) the stock piling of materials by ICRISAT in on-site sheds, e.g. steel bars, insulation materials, posts; and (b) the definitive specifications which the architects and bidders now had, enabling them to give more accurate estimates. Still, a 10% p.a. escalation might be too low.

/Continued...

February 24, 1975

- 2 -

6. The \$33 million ceiling is for operating and capital (including equipment) costs in 1974-77. Spending in 1975 was below schedule, partly in view of our insisting on re-bidding. There are \$15.65 m. for operations and \$17.35 m. for construction/equipment. The latter total is now estimated at closer to \$21 m., including the second priority items (second dormitory, last laboratory, second round of houses, etc). The \$3 m. carryover from 1974 is being used for the stockpiling referred to above. As this stage, just prior to the internal reviews and budget preparations due to be completed on April 1, Cummings did not have revised total figures for operations in 1975-77, nor a phasing of operating and capital costs for 1974-77 to update that of last April. He thought, however, that the cash flow problem - a construction costs gap to be met hopefully by a Bank Group advance as discussed by Demuth and McNamara in 1972 - would be needed for a short time at the end of 1976; there was no gap likely in 1975 owing to delays in spending.

7. It should be noted that the two on-site men helping ICRISAT with its construction program are Leach and Bonage, both from New York firms, who helped construct the edifices which now constitute the IITA in Ibadan. This augurs badly for cost control and argues for Bank supervision, as in the Baum/Pagot letter of April 19, 1974 (and as specified in the Integrative Paper).

8. On additional fund prospects, referred to in his letter, Cummings has the hope of Kresge funds for the \$350,000 library which is in the construction plan and he has been assured of additional UK support in 1975 if requested with CG support - a point borne out by your London discussions on 2/21.

Soejima indicated to me that day that Japan had problems in supporting ICRISAT, presumably relating to foreign policy issues and reportedly poor use of Japanese funds by the Government of India. (On the otherhand, the Australians will double their CGIAR contribution in 1976 which could provide an extra \$500,000 for ICRISAT.)

9. Next steps; The Ruddy/Coulter visits of the week of March 10 should take up these issues. Ruddy will particularly work on a new 1975-77/78 package of operating and capital costs - total and by year - to see if \$33 m. must remain maximum, given inflation and the other needs of the CGIAR system. The housing question needs to be decided on policy grounds and in the light of Hyderabad conditions and ICRISAT's needs on-site. The bridging funds issue will re-cur. A decision on action to gather new funds specifically for ICRISAT must be made. I think the \$33 m. ceiling will have to go. We need a new package with perhaps a different time span and with a decision on priorities which weighs needs, claims in the system, and the desirability of keeping the momentum which ICRISAT has been building up. Operating costs will have to go beyond the agreed \$15.65 m. in view of inflation, unless recruitment is delayed. (The above takes no account of the addition to the \$33 m. arising from inclusion of groundnuts in the center mandate, at a cost of \$300,000 rising to over \$500,000 p.a.)

/Continued...


Mr. Michael L. Lejeune, CGIAR Secretariat

February 24, 1975

- 3 -

10. The ICRISAT donors need to be informed of the above. Perhaps an interim aide memoire prior to the Ruddy/Coulter visit indicating the problems and options, inviting suggestions, and promising a report and recommendation in April after the mission has returned.

c.c. Messrs. Baum, Ruddy, David Lewis, William Lewis, Graves,
Ritchie, Delaume, Johanson/Stam

 BruceMCheek/ms/G7



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

Mr. Legume
G-7

Phones : City Offices : 72091, 72628
Laboratory : 36029
Farm : 39676
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-366

CITY OFFICE :
1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

February 24, 1975

Mr. Bruce Cheek
Consultative Group on Int'l Agril. Research
1818 H. Street N.W.
Washington, D.C. 20433
U.S.A.

Dear Bruce,

Upon my return to Hyderabad this week I find copy of your recent cable concerning the classification of the contribution from Nigeria to the ICRISAT budget. I was glad to have had the opportunity of discussing this with you and with Harold Graves while in Washington last week. As I indicated at that time, the purpose for which this money is being provided was not included in our core budget estimates but was for the non-core cooperative activities set forth in the last section of our 1975 Budgetary Program Proposals. I recognize that the exact classification may create some little bit of problem in your office but wish to let you know just what our classification was in making our budget requirement projections.

With very best regards, I am,

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

cc: Mr. Harold Graves

RWC:jg

Mr. Michael L. Lejeune, CGIAR Secretariat

February 22, 1975

Bruce M. Cheek, CGIAR Secretariat (signed) Michael L. Lejeune

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February 22, 1975

- 2 -

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c.c. Messrs. Ruddy, David Lewis, William Lewis, Graves, Ritchie, Johanson/Stam.

1st LIST
(206 copies)

GK
cc G-7

February 21, 1975

To: Members of the Consultative Group

From: Executive Secretariat

Nominations to the Board of Trustees of CIP and the
Governing Board of ICRISAT

The Charter of the International Potato Center (CIP) and the Constitution of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) provide that three members of the CIP Board of Trustees and three members of the Governing Board of ICRISAT shall be nominated by the Consultative Group. Action is now required by the Group because in each case the term of one of the members so nominated expires in the coming months.

ICRISAT

The Governing Board of ICRISAT requests that the Consultative Group favorably consider the re-election to the Board of Dr. Ralph Melville. The co-sponsors (FAO, UNDP and IBRD) concur in the request.

Dr. Melville is the Chief Natural Resources Adviser of the Ministry of Overseas Development of the United Kingdom. His term expires in April, 1975 and the request is for his appointment to a second three-year term beginning thereafter.

CIP

The Executive Committee of CIP would like the members of the Consultative Group to consider favorably the re-election to the Board of Dr. Borge Jacobsen. The co-sponsors concur in this request.

Dr. Jacobsen is Superintendent of the Improvement Station of the Danish Farmers' Potato Breeding Foundation, Vandel, Denmark. His term expires in May, 1975 and the request is for his appointment to a second term of three years beginning in May.

Recommendation

The co-sponsors recommend that both Dr. Melville and Dr. Jacobsen be re-nominated for three-year terms on the Boards of ICRISAT and CIP, respectively. If no other nominations are received by the Secretariat by March 21, they will be deemed to have been so nominated and the Chairmen of the two Boards will be notified accordingly. If members wish to nominate other individuals for these seats, nominations should reach the Secretariat no later than March 21, 1975.

Bmk

OUTGOING WIRE

TO: STEINARCH
NEW DELHI

DATE: FEBRUARY 19, 1975

CLASS OF
SERVICE: LT
(3454)

COUNTRY: INDIA
ATTENTION J.A. STEIN

TEXT:
Cable No.:

AUTHORIZE RELEASE LETTERS OF INTENT TO CONTRACTORS FOR CIVIL
PLUMBING ELECTRICAL CONTRACTS ICRISAT INSTITUTIONAL BUILDINGS AS
DISCUSSED FEBRUARY FIVE STOP ALSO AGREE IF NECESSARY EXTRA COST NOT
EXCEEDING FIVE PER CENT DORMITORY FLATLET GROUP RESULTING FROM REDUCED
VOLUME WORK CAUSED BY POSTPONING SOUTH DORMITORY STOP REQUEST CONTRACTS
PREPARED FOR SIGNATURE SOON AFTER MY RETURN STOP PROCEED INVITATION TENDERS
FIRST GROUP STAFF HOUSING AS DISCUSSED STOP

CUMMINGS

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME ~~R.W. CUMMINGS~~ Harold N. Graves, Jr.

DEPT. CGIAR Secretariat

SIGNATURE *Harold N. Graves, Jr.*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: RWCummings/ms

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: STEINARCH
NEW DELHI

DATE: FEBRUARY 19, 1975

CLASS OF
SERVICE

LT
(3454)

COUNTRY: INDIA
TEXT: ATTENTION J.A. STEIN
Cable No:

AUTHORIZE RELEASE LETTERS OF INTENT TO CONTRACTORS FOR CIVIL
PLUMBING ELECTRICAL CONTRACTS ICRIAS INSTITUTIONAL BUILDINGS AS
DISCUSSED FEBRUARY FIVE STOP ALSO AGREE IF NECESSARY EXTRA COST NOT
EXCEEDING FIVE PER CENT DORMITORY FLATLET GROUP RESULTING FROM REDUCED
VOLUME WORK CAUSED BY POSTPONING SOUTH DORMITORY STOP REQUEST CONTRACTS
PREPARED FOR SIGNATURE SOON AFTER MY RETURN STOP PROCEED INVITATION TENDERS
FIRST GROUP STAFF HOUSING AS DISCUSSED STOP

CUMMINGS

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

DEPT

SIGNATURE

REFERENCE

RNCumminge/ms

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REMARKS AND COPY DISTRIBUTION

Harold N. Cummings Jr.

FEB 19 4 33 PM 1975

OGIAR Secretariat

SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

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IMPORTANT: See instructions inside for filling in form

OUTGOING WIRE

TO: CRISAT
SECUNDERABAD

DATE: february 19, 1975

CLASS OF
SERVICE:

Telex 015-366
(3454)

COUNTRY: INDIA

TEXT:
Cable No.:

LEACH KANWAR HAVE AUTHORIZED ARCHITECTS FORWARD TO CONTRACTORS LETTERS
INTENT INSTITUTIONAL BUILDINGS INCLUDING DORMITORY AND FLATLET AND
PROCEED INVITATION TENDERS FIRST GROUP HOUSING STOP HAVE ALSO REQUESTED
PREPARATION CONTRACTS FOR EARLY SIGNATURE.

REGARDS

CUMMINGS

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME **R.W. CUMMINGS** Harold N. Graves, Jr.

DEPT. CGIAR Secretariat

SIGNATURE *Harold N. Graves, Jr.*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: RWCummings/ms

ORIGINAL (File Copy)

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INTERNATIONAL FINANCE
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

TO: CHIEF
SECUNDERABAD

DATE: February 19, 1975

CLASS OF
SERVICE

COUNTRY: INDIA

TEXT
Cable No.

LEACH KANWAR HAVE AUTHORIZED ARCHITECTS FORWARD TO CONTRACTORS LETTERS
INTENT INSTITUTIONAL BUILDINGS INCLUDING DOMITORY AND FLATLET AND
PROCURED INVITATION TENDERS FIRST GROUP HOUSING STOP HAVE ALSO REQUESTED
PREPARATION CONTRACTS FOR EARLY SIGNATURE.

REGARDS

CUMMINGS

NOT TO BE TRANSMITTED

REMARKS AND COPY DISTRIBUTION

REMARKS BY

NAME

DATE

SIGNATURE

REMARKS

RECOMMENDATIONS

ORIGINAL (File Copy)

FOR ORIGINATOR: See Remarks (File for pressing form)

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INCOMING CABLE

RECEIVED

G-7.

Distribution: Mr. Cheek ✓
Mr. Kraske

ZCZC 248423 RC044 PDB0023 FEB 16 AM 11:33 RML4985 KNY287 BDS962/12

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COMMUNICATIONS
SECTION

SECUNDERABAD 55 12 1810

Feb 15 1975

LT

INTBAFRAD

WASHINGTON DC(USA)

ATTENTION CHEEK REURCAB CUMMINGS AWARE YOUR EARLIER MESSAGE IN
PART STOP DETAILED MESSAGE RECEIVED ONLY AFTER DEPARTURE STOP HAVE
FORWARDED BY MAIL YOUR MESSAGE HIS USA ADDRESS RALEIGH AND WASHINGTON

STOP SUBSTANTIAL INFORMATION WAS COMPILED FOR DISCUSSIONS WASHINGTON
PRIOR HIS DEPARTURE AND HENCE ASSUME HAS ENOUGH INFORMATION FOR
DISCUSSIONS

KANWAR CRISAT SECUNDERABAD

OUTGOING WIRE

TO: FARROW
AEROFOIL COLCHESTER
COLCHESTER

DATE: FEBRUARY 13, 1975

CLASS OF
SERVICE: TELEX 98422

COUNTRY: ENGLAND

TEXT:
Cable No.: REURLET OF NINE DECEMBER THIS TELEGRAM WILL CERTIFY THAT ICRISAT HAS THE FINANCIAL SUPPORT OF FIFTEEN GOVERNMENTS AND INTERNATIONAL ORGANIZATIONS NAMELY AUSTRALIA BELGIUM CANADA WEST GERMANY NETHERLANDS NIGERIA NORWAY SWEDEN SWITZERLAND UNITED KINGDOM UNITED STATES UNITED NATIONS DEVELOPMENT PROGRAMME UNITED NATIONS ENVIRONMENT PROGRAMME INTERNATIONAL DEVELOPMENT RESEARCH CENTRE OF CANADA AND WORLD BANK GROUP. THESE DONORS HAVE PLEDGED TO PROVIDE ICRISAT WITH 33,000,000 DOLLARS OVER PERIOD 1974 THROUGH 1977 OF WHICH 8,255,000 DOLLARS IS BEING MADE AVAILABLE FOR DISBURSEMENT IN 1975. FURTHER QUESTIONS ABOUT ICRISAT COULD BE ANSWERED BY RALPH MELVILLE OF OVERSEAS DEVELOPMENT MINISTRY IN LONDON.

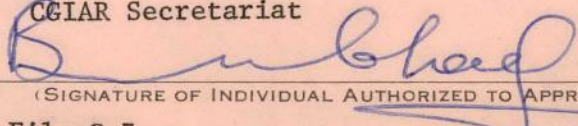
HAROLD GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Bruce M. Cheek, Deputy Executive Secretary

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: File:G-7

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INTERNATIONAL FINANCE
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

DATE FEBRUARY 13, 1975

CLASS OF
SERVICE TELEX 98422

TO: FARRON
VERMOREL COLCHESTER
COLCHESTER

COUNTRY: ENGLAND

TEXT:
Cable No. 1
REURTEL OF NINE DECEMBER THIS TELEGRAM WILL CERTIFY THAT ICRISAT HAS THE
FINANCIAL SUPPORT OF FIFTEEN GOVERNMENTS AND INTERNATIONAL ORGANIZATIONS
NAMELY AUSTRALIA BELGIUM CANADA WEST GERMANY NETHERLANDS NIGERIA NORWAY
SWEDEN SWITZERLAND UNITED KINGDOM UNITED STATES UNITED NATIONS DEVELOPMENT
PROGRAMME UNITED NATIONS ENVIRONMENT PROGRAMME INTERNATIONAL DEVELOPMENT
RESEARCH CENTRE OF CANADA AND WORLD BANK GROUP. THESE DONORS HAVE PLEDGED
TO PROVIDE ICRISAT WITH 33,000,000 DOLLARS OVER PERIOD 1974 THROUGH 1977
OF WHICH 8,255,000 DOLLARS IS BEING MADE AVAILABLE FOR DISBURSEMENT IN 1975.
FURTHER QUESTIONS ABOUT ICRISAT COULD BE ANSWERED BY RALPH MELVILLE OF
OVERSEAS DEVELOPMENT MINISTRY IN LONDON.

HAROLD GRAVES

COMMUNICATIONS

FEB 13 4 49 PM 1975

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Bruce M. Check, Deputy Executive Secretary, CHINGRAVES:1a

CHIAI Secretariat

FILE: 0-7

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February 12, 1975

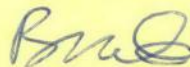
Mr. Robert Redd
Robert L. Redd and Co.
515 N. Sierra Drive
Beverley Hills
California 90210

Dear Mr. Redd:

I refer to our telephone conversation last week concerning the work of the CGIAR and your interest in particular in problems of farming in arid and semi-arid areas.

I am enclosing for your information a brochure on the work of the various institutes which make up the agricultural research system sponsored by the Consultative Group. Also enclosed is a copy of the press release issued after the meeting of the CG at the end of October, 1974. This release indicates that the CGIAR is now working to establish a center in the arid regions extending across the North of Africa and the Middle East to Pakistan. The center would, we would hope, work on farming systems related to sheep, barley and wheat, and other crops such as lentils. ICRISAT, which is described in the brochure, is establishing research links with the Sahelian area of Africa.

Sincerely,



Bruce M. Cheek
Deputy Executive Secretary

Enclosures



BMCheek/ms/

OUTGOING WIRE

TO: CRISAT
SECUNDERABAD

DATE: FEBRUARY 10, 1975

CLASS OF
SERVICE: LT
(3454)

COUNTRY: INDIA

TEXT:
Cable No.:

REFERENCE MY CABLE OF FEBRUARY 3 ON CAPITAL CONSTRUCTION PROGRAM COMMA
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DEPARTURE AND REGARDING STATUS OF INFORMATION REQUESTED STOP

REGARDS

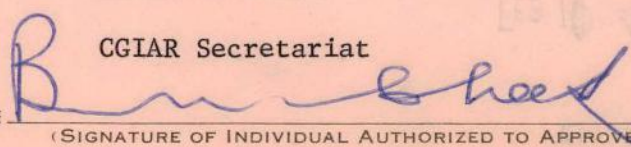
CHEEK

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Bruce M. Cheek

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

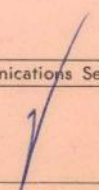
REFERENCE:

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

DATE FEBRUARY 10, 1975

CLASS OF
SERVICE
LT
(3454)

TO
TELETYPE
UNITED STATES

COUNTRY
INDIA

TEXT
Cable No.

REFERENCE MY CABLE OF FEBRUARY 3 ON CAPITAL CONSTRUCTION PROGRAM COMMAS
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DEPARTURE AND REGARDING STATUS OF INFORMATION REQUESTED STOP

REGARDS

CHEEK

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COMMUNICATIONS

FEB 10 4 04 PM 1975

Bruce M. Cheek

CGIAA Secretariat

SIGNATURE OF INDIVIDUAL AUTHORIZED TO DISPATCH

Bruce M. Cheek / m/G
ORIGINAL (File Copy)

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G-7



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72001, 72028
Laboratory : 30029
Farm : 29676
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-386

CITY OFFICE :
1-11-256, Begumpet,
Hyderabad-500016, A. P., India.

February 5, 1975

Mr. Michael LeJeune
Executive Secretary
CGIAR
Washington, D.C.

Dear Mr. LeJeune,

We have great pleasure in sharing with you the sentiments expressed in the enclosed statements made by the various distinguished personalities on the occasion of the foundation stone laying ceremony for the ICRISAT building complex on January 11, 1975.

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

Encl:

RWC:jg

INCOMING MAIL UNIT
1312 FEB 15 PM 3:08
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INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

CITY OFFICE:
1-11-558, Begumpet,
Hyderabad-500016, A. P., India.

Phone : City Office : 2507, 2528
Telex : ICRISAT 252-505
Cable : ICRISAT 252-505
GPO : CRYSTAL BEGUMPET
Hyderabad-500016, A. P., India.

February 5, 1975

Mr. Michael Lelume
Executive Secretary
CGIAR
Washington, D.C.

Dear Mr. Lelume,

We have great pleasure in sharing with you the sentiments expressed in the enclosed statements made by the various distinguished personalities on the occasion of the foundation stone laying ceremony for the ICRISAT building complex on January 11, 1975.

Sincerely yours,

Ralph W. Cummings
Ralph W. Cummings
Director

Encl:

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1975 FEB 12 PM 3:08
INCOMING MAIL UNIT

RWC:18



THE INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

FOUNDATION STONE CEREMONIES

Patancheru, Medak District
Andhra Pradesh

January 11, 1975

SPEECHES BY PARTICIPANTS:

Dr. C.F. Bentley, Chairman of Governing Board

Dr. R.W. Cummings, Director

Mr. Roy I. Jackson, Deputy Director General, FAO

Mr. Bilsel Alisbaah, Deputy Resident Representative
of World Bank in India

Shrimati Indira Gandhi, Prime Minister of India

Dr. M.S. Swaminathan, Director General of the Indian
Council of Agricultural Research and Vice Chairman
of the Governing Board

Dr. C.F. Bentley
Chairman, ICRISAT Governing Board

Madam Prime Minister

It is with great pleasure and genuine sincerity that I extend to you on behalf of the Governing Board of ICRISAT a very cordial welcome. It is human to be pleased when others join us on festive and joyous occasions. Happiness likes company and so we warmly welcome you here today, as what is for ICRISAT, a most happy and important event in the Institute's brief history.

It is also a human characteristic to be delighted when others show interest in our work, our goals and our aspirations. It is especially pleasing when demonstrated genuine interest reflects an understanding and sharing of the goals that motivate us. That is another reason for the warm welcome to you today.

Madam Prime Minister and friends. Your presence here reflects global concern for the welfare of the people who form the semi-arid tropics. ICRISAT has an almost awesome mandate. The magnitude and complexity of our assignment lead me to express publicly, on this happy occasion, the admiration and appreciation of the Governing Board of ICRISAT of the work of the Institute's staff. They are genuinely outstanding. Scientists, technicians, office personnel and workers have, I think a noble goal seeking ways to improve the life for people in the semi-arid tropics. To me, the accomplishments of the ICRISAT staff during these initial thirty months of the Institute's existence, are unquestionably remarkable. And so we also welcome you here today because your presence is a recognition of their achievement. ICRISAT personnel have magnificent leadership.

In concluding this welcome, I wish to express the Board's recognition and deepest appreciation of the untiring efforts and inspiring dedication being provided by Dr. Cummings as Director, and Mrs. Cummings, and by Dr. Kanwar, our Associate Director, and Mrs. Kanwar. We wish to thank them publicly for their willingness to serve mankind by accepting positions here. Both could have elected less arduous employments and more comfortable settings at much higher emoluments.

I also express genuine appreciation and sincere thanks to our Architects, Messrs. Doshi, Stein and Associates for the determined and talented efforts to design for ICRISAT, facilities combining dignity, practicality and utility with quality. To our honoured guests and indeed to our visitors, I say that the Institute's Governing Board considers your presence, your interest and your continuous support will be the basis which will enable and inspire ICRISAT to make a truly significant contribution to the betterment of mankind in the semi-arid tropics.

And so, a very cordial welcome to you all.

THE MISSION OF ICRISAT

By

Ralph W. Cummings
Director

ICRISAT, the International Crops Research Institute for the Semi-Arid Tropics, supported by the Consultative Group on International Agricultural Research, was created to serve a large segment of humanity which has been left behind in modern advances in the sciences of agricultural production. It has a mandate and a mission for improving the supply, dependability and quality of food supply and of the opportunities for a life of dignity and self-reliance for some 500 million people living in the semi-arid tropics. These are people with limited capital and land resources who wrest their livelihood and their food supply from the cultivation of soils of limited fertility in a harsh environment. Temperatures during the growing season are high. Rainfall is scarce and seasonal and of uncertain and variable frequency and may come with such intensity as to make its retention and effective utilization difficult. With limited capital and power, the amount of land which a cultivator and his family can till during this short growing season is small. The major staple food crops of these regions are sorghum (jowar), millet (bajra), groundnuts, and pulses such as pigeonpea, chickpea and cowpeas.

The mandate and mission of ICRISAT can only be realized through the concerted efforts of the agencies, institutions, and people of the regions concerned. With a small inter-disciplinary team of dedicated scientists, ICRISAT expects to join hands with the indigenous forces and complement, support, and hopefully strengthen their efforts and improve the continuity and sharpness of focus of these efforts toward approaches that have greatest promise for yielding effective solutions. Already the Institute has assembled a very impressive array of the world's genetic diversity of the sorghum, millet, chickpea and pigeonpea crops and is characterizing this material systematically. It is being recombined into groups from which scientists in the concerned regions can make selections of material which will be adapted to their local circumstances, and which can withstand drought and attacks of diseases and pests sufficiently well to yield a dependable harvest, and to provide a food supply of good nutritional quality. Principles for improving the management of soils and crops for making the most efficient use of the rainfall which comes, even with its uncertainty as to frequency and intensity, are being studied. A network of cooperative arrangements with the concerned countries in Asia, Africa, Central and South America is being forged. At the same time, the financial support coming from Europe, North America, and Australia is being backed up by relevant and complementary studies in their scientific laboratories and institutions.

ICRISAT faces a very difficult task and quick and spectacular results will not be easy to achieve. Perhaps herein may lie the reasons why this segment of the world's people has been so largely left behind and neglected while breakthroughs have been achieved earlier for more favoured regions. But herein lies the challenge and ICRISAT accepts it with enthusiasm, hope and confidence that real and important progress for this

segment of world agriculture can be achieved if we but have the imagination, energy, and singleness of purpose to find and exploit these opportunities.

The cooperation and support of the host state and national governments have been exemplary and unstinting. Likewise the support and backing of the members of the Consultative Group on International Agricultural Research have been very generous. Fifteen countries and agencies are now providing direct financial support to the Institute. It is fitting that the representatives of the FAO, the World Bank, and the Governments of India and Andhra Pradesh who jointly sponsored and promulgated the Constitution are here today to commemorate this landmark in the Institute's development. We are determined that with God's help and the dedicated hard work of all concerned, we shall overcome the obstacles and find solutions to the problems faced by this important segment of the world's people who are struggling to find ways to assure an adequate and dependable food supply for their families and opportunities for a brighter future.

Mr. R.I. Jackson
Deputy Director General
Food and Agriculture Organization of the United Nations (FAO)

Madam Prime Minister, Chairman, Excellencies, Ladies and Gentlemen:

I greatly appreciate the opportunity to participate on behalf of the Food and Agriculture Organization of the United Nations on this notable occasion. We are witnessing the formal foundation of an institute which has a formidable task - the improvement of crops and cropping systems in the semi-arid tropics - a zone covering some 40% of the developing tropics and supporting some 400 million people who have up to now enjoyed little of the benefits of modern agricultural technology. I feel some pride in the fact that FAO can justly claim to be one of the founding partners of ICRISAT since not only we were together with the World Bank, one of the co-signatories of the Charter, but from the inception of the Consultative Group, drew attention to the need to focus more research effort in the areas and on the crops with which ICRISAT is concerned. As you had mentioned elsewhere Mr. Director, you have one of the most difficult environments to cope with and you would want that startling results should not be expected in the short term.

Nevertheless, if the research programs of the Institute are pursued with the outstanding vigour and determination which has so far been manifested by your staff and which enabled important field programs to be conducted with success in the first year of operations in the face of one of the worst droughts that occurred, I believe the Institute will make a substantial impact on the problems which it confronts. My colleagues have also given me most encouraging reports on progress being made in your work in the crucial fields of water harvesting and soil conservation.

It is most encouraging to see ICRISAT is developing a fully integrated program toward providing a workable package of technology to the farmers. I must applaud, Madam Prime Minister, the foresight of your Government in making available the land and the facilities for this new Institute. It is always through such wider identification of national interest with the problems of global concern that the necessary concerted attack on problems of food production and general world development can be brought about. I am also happy to note that India in cooperation with the Canadian Government is pursuing an important nation-wide program of its own in dryland agriculture with the headquarters here in Hyderabad and with close links with ICRISAT. I hope that this will provide a wider testing ground for the findings of ICRISAT and that through its village pilot projects, means may be found of transmitting the results of the research to your farmers.

However, while physically situated in India, the work of ICRISAT will have application to the semi-arid zones of other Asian countries as well as to Nigeria, South Asia and Latin America and Africa as well. It is most encouraging to hear that outreach and linkage program in the major sorghum, millet and groundnut regions of Africa are already being organized. I also note from a recent seminar organized by FAO on problems of rain-fed farming in Asia that there is strong interest among Asian countries in developing

working links with ICRISAT. I hope that further bilateral or international cooperative programs could be developed in some of these countries as part of a network in which ICRISAT would be the essential element, since I believe that, competent as they are, the international centers alone cannot be all embracing. There are many problems of adaptation and implementation at the farm level, which must be overcome if your research is to be fruitful, that are best tackled by national agencies with appropriate assistance.

I would like to assure you that FAO will do all it can to help develop such linkages.

I believe also that a tribute is due to the Consultative Group on International Agricultural Research and its Technical Advisory Committee whose efforts and the financial support of the Governing Members had made possible the establishment of the worldwide network of major research centers in developing and developed countries of which ICRISAT forms a part.

I believe that this new and exciting venture will be recognized as a milestone in the improvement of cooperation at the international level.

And, finally, Mr. Chairman, I would like to express to the Director and Staff of ICRISAT, the warmest good wishes of our Director General and Staff of FAO for a successful and rewarding future.

Thank you.

Mr. Bilseel Alisbaah
Deputy Resident Representative
World Bank, New Delhi

Madam Prime Minister, Distinguished Guests:

I am honoured to represent the World Bank here today. I know that most of us in the World Bank, including our President, Mr. MacNamara regards ICRISAT as one of the most exciting ventures that the World Bank is involved with. I cannot think of a more appropriate activity in these difficult times in this world we live in than the setting up of ICRISAT with its wonderful goal. I think the Foundation Stone which you are about to lay, Madam Prime Minister, represents an investment in the future of mankind and I am honoured to be bringing the greetings and the best wishes of the World Bank and I am proud that one day I will be able to tell my children that I was there when history was being made.

Thank you. .

Shrimati Indira Gandhi

Prime Minister of India

Mr. Chairman, Mr. Director, Members of the Board of ICRISAT and Distinguished Guests:

I am very happy to be here today because we give great importance to this Institute and the work that it is undertaking.

There is no doubt today that amongst the many problems which our country and perhaps many like us in other parts of the world face, the question of food is the foremost and the most important. If this question can be solved for our people then only we will have a basis to go ahead with many other programs which are necessary for their welfare and their progress.

Just a few days ago, I had the opportunity of meeting a gathering of scientific leaders of our country and I exhorted them to concentrate their efforts on overcoming the shortages of food and energy in our country and on developing a new outlook of technology which would transform our rural economy. This Institute represents an international endeavour to provide the benefits of new knowledge to those farmers who live in drier regions which have neither the benefit of heavy rain nor are close to perennial rivers and canal systems.

My father often said "everything else can wait, but not agriculture". Both he and the Government were conscious that only science and technology would help our farmers to extract more and more food from the hungry and thirsty soil which has been cultivated for thousands of years. This is why we proceeded systematically with the building up of the infrastructure of research and training through the various institutions of the Indian Council of Agricultural Research and Agricultural Universities. We are proud of our own scientists and institutions, but we also welcome suggestions and help from those who are willing to offer them. This Institute I think is one of the fine examples of such exchange of ideas and efforts and stretching the hands of friendship and cooperation across the fields.

I am glad to see here many scientists who have helped us at various points of time improving our agriculture. Dr. Cummings was one of those who was actively involved in the 1960s in developing our All India Coordinated Research Projects and Agricultural Universities. Dr. Bentley played an important role in forging Indo-Canadian cooperation in Dry Farming Research. Adjoining this site is a symbol of the quest for self-reliance on which we embarked when we became independent, The Bharat Heavy Electricals ...

There are some who are constantly saying that India laid wrong stress on industrialization in early years of its planned development. But the industries that we chose to develop and the large river valley projects which we initiated have proved to be acts of foresight and wisdom since they are providing the means of modernization of our agriculture. Similarly,

we have been accused of following a wrong path in pursuing the intensive agricultural strategies. This gave us what is commonly known as the Green Revolution. It is common now-a-days to decry this effort but it should not be forgotten that this policy was a direct and immediate reaction which followed the drought of 1966-67 when our grain production fell by 20% to 25%. At that time, we had to act quickly to produce more and naturally we had to do so by resorting to high input farming in irrigated land by adopting new varieties of seeds. Even then we knew that it might lead to imbalances and social tension. Hence we lost no time in evolving a countervailing program for the dry areas and for marginal farmers.

Where our agriculture has been modernised the yields have increased and production and incomes of farmers have gone up and are not subject to wide fluctuations. It is in semi-arid and dry areas that yields remain low and production and income of farmers fluctuate widely, depending upon the vagaries of the monsoon. The shortfall of production in dry areas in years of poor rainfall seriously affect the food situation and economy of the country as a whole. Farming in such areas has therefore got to be modernised as early as possible. In addition to the other work, which we are trying now, we look forward for guidance from this Institute in this regard.

Geographers and plant historians think that India had agricultural contacts with the new world before the discovery of America. The history of the emergence of the new world cotton which claimed an Asiatic cotton as one of its parents and the occurrence of very primitive forms of maize in Sikkim and the North Eastern Himalayas serve as examples of possible exchange and movement of plant material across the world long before modern methods of communication developed. We have a wide range of climatic and ecological conditions in our country and are endowed with a great variety of plants. We welcome exchange, that is to share our material with others and receive what others would like to give us. In the battle against hunger we feel that humanity should act with single minded purpose and devotion. There should be no first, second, third or fourth world in this effort. The initiatives taken by the FAO, the World Bank, the UNDP in starting the Consultative Group on International Agricultural Research marks a good beginning. I am glad to learn that there has been a substantial increase in funds for agricultural research following establishment of this Consultative Group and its Technical Advisory Committee in 1971. We are all glad that this particular institute is the first trial of this international endeavour.

Judging by the progress you have made in thirty months, I am confident that you will set an example to others. You have taken up crops, i.e. sorghum, pearl millet, chickpea, pigeonpea and groundnuts which are important to the economy of semi-arid areas. Pulses and oil seeds also deserve special attention. Relative yields and advantages influence the decision of the farmer in his choice of crops. Hence my anxiety for greater scientific progress in improving the pulses and oil seeds. The African countries are engaged in seeking methods to reduce the intake of fats and oils. In India, we have to substantially increase the availability of fats and oils, since the per capita intake is only 10 grams, about a third of

what is considered essential. When we realize that averages do not have much meaning in food statistics, inadequacy becomes a serious matter. It is good that you are including groundnuts in the scope of your research charter and the leading authorities of this crop have offered to provide material in improving the productivity of this crop. I am told that the land which is being given to this Institute was originally being cultivated by several hundred farmers families. You have demonstrated what can be done to transform yields in such an area if competently and scientifically managed. In the early stages of scientific farming in India, the peasant's participation is essential. He was not impressed by what he saw on our demonstration farm. He doubted whether he himself could achieve the same results. Agricultural scientists and extension workers of this Institute must be willing and able to convince farmers that good results can be achieved without great expense of money or energy by him on his own land. The essence of the new approach to dry farming is mutual self help in the village and the common endeavour of the village community for achievement depends on larger input of labour. What cannot be done individually can be achieved by people working together as a group. In dry farming regions, operations like water conservation and recycling, pest control and prevention of soil erosion should be implemented jointly as a community endeavour. Such an effort should be supported by an appropriate farmer service department. The agricultural production program in these areas should be reoriented on these lines.

I am glad to lay the Foundation Stone of the Building Complex of this Institute which symbolises the pooling of talents of scientists and technologists regardless of nationality, race or colour in this greatest of all wars, the war against hunger. The Government of India will continue to extend full support to the aims and programs of this Institute and may I wish all of you who are working here success in your work.

Jaihind.

VOTE OF THANKS

By

Dr. M.S. Swaminathan

Director General of the Indian Council of Agricultural Research, and
Vice-Chairman of the ICRISAT Governing Board

Madam Prime Minister, Honourable Chief Minister of Andhra Pradesh, Chairman of the ICRISAT Board, Dr. Bentley, Dr. Cummings, distinguished guests, ladies and gentlemen:

Both on behalf of the host country and on behalf of the ICRISAT Board, I have been asked to perform the pleasant duty of thanking many who have made this Institution's existence possible and its growth also so rapidly possible. First of all, may I thank the Food and Agricultural Organization of the United Nations, the International Bank for Reconstruction and Development, and the United Nations Development Program, the three co-sponsors of the Consultative Group on International Agricultural Research and its Technical Advisory Committee.

In our view, this has been one of the most significant developments in recent years in trying to give an organized shape to international cooperation in research relating to the war on hunger, as the Prime Minister said. The efficacy of this mechanism would be evident from the fact that, although the whole mechanism came into existence only in June 1971, the Government of India signed an agreement for this Institute in the first part of 1972. Hardly six months after the founding of the whole mechanism, this Institute itself came into existence. This shows the power and the possibility of this particular mechanism and on behalf of the Government of India, I would like to assure the three agencies and the various co-sponsors, of our total cooperation in this endeavour.

This particular Institute, although the youngest one, not now the youngest one but it was so until last year, has attracted probably the widest support amongst nations from the point of view of financial help. At present, the International Bank for Reconstruction and Development, the UNDP, the International Development Research Centre of Canada, the United States, Canada, the United Kingdom, Germany, Switzerland, Belgium, Netherlands, Sweden, Norway, Australia and Nigeria are supporting this particular institution and I would like, on behalf of the Board, to extend our sincere thanks to all these sponsors.

The Ford Foundation acted as the executing agent in the early months of the establishment of this Institute and I must express on behalf of the Board, our sincere thanks to Mr. Harry Wilhelm and his colleagues of the Ford Foundation for the good start they gave in the establishment of the Institute. The Government of Andhra Pradesh, particularly the Chief Minister, the Minister for Agriculture and the various officials deserve both our gratitude and our appreciation.

Madam Prime Minister, when an International Committee headed by Dr. Cummings was established by the Consultative Group for searching a location for this Institute, after visiting many countries in the world,

the Committee finally selected this site in Andhra Pradesh. This is a great tribute to the Government of Andhra Pradesh, which produced an excellent background paper giving all the advantages of this particular location for the efficient execution of the research charter of this Institute. Mr. Chief Minister, I would like you Sir, to convey our thanks to all your staff.

Dr. Bentley, as already mentioned by Dr. Cummings, has been a working Chairman, and whenever he is not teaching Soil Science at Alberta he is on ICRISAT's mission. We want to thank Dr. and Mrs. Bentley who also served as Project Development Officer of this Institution until Dr. Cummings came and joined as the regular Director. They have done a great job, and I would also like on behalf of my colleagues, Messrs. Pande and Bhagwandas, the Indian Members of the Board nominated by the Government of India, to thank our other members of the Board drawn from different countries for the interest they have shown and for their real enthusiasm and dedication for the work of the Board.

Dr. Cummings, as already been mentioned by the Prime Minister, has been associated with the growth of the recent Indian Agricultural Research and Training history since 1957 in various capacities. We were happy when he chose to leave the International Rice Research Institute as its Director, and came here just three months after going there and he and Mrs. Cummings have spared no pains and efforts all these months and years in seeing to it that this Institute comes up very fast. Our sincere thanks are also due to the entire staff for their dedication and hard work.

In fact, Madam Prime Minister, I must tell you that although the basis for the Constitution of the Institute was established in February, 1972 and it was officially born in July 1972, when the people came to sign the Constitution it was an inspiring sight to see crops being grown on the ground. Thus, not even a day was lost in starting the work of the Institute. May I thank the various Ambassadors and distinguished guests who have responded to the invitation for this foundation stone ceremony, and the Architects, both Messrs. Doshi, Stein and Associates who, as already mentioned, have done a tremendous job.

Finally, I want to mention two special Votes of Thanks. First, to the farmers of the villages in the Patancheru area. The Prime Minister mentioned the fact that a large number of farmers' families left this place and they are now located in the adjoining site or at other places. I have seen the crops grown by these farmers before and they themselves have seen and now they see what kind of crops are grown here. In my view many of them would serve as excellent extension agents because they know the past history, they have farmed for thirty to forty years here, they know the changes that have taken place and with a little more of training it is these kind of people I think who can take the message most effectively to the village communities. May I hence appeal to you, Sir, Mr. Chief Minister to use them effectively as your extension agents. Another admirable act is the way in which they moved out of this place. This shows the tremendous resilience and tremendous amount of suffering that the people were prepared to put up with for a good cause. I am sure that the staff of the Institution and all of us connected with the Institute will

ensure that the sacrifice they have done by leaving their particular places of residence and their farms, would be compensated by the help that the Institute can render to millions of people like them.

Finally, Madam Prime Minister, may I thank you most sincerely for the time and inspiration you have given. Those of us who are working in the field of science and technology in this country know that the rich traditions which her father and herself have set in science. But you, Madam Prime Minister, if I may say so, have introduced a new concept or a new outlook in the scientific community in India namely the introduction of the concept of social audit in our work, in addition to purely scientific achievement audit. The fact that you have taken over recently as the Minister of Science and Technology is yet another proof of your total conviction that it is only understanding nature, understanding the ecological processes and transforming nature both under short term and long term goals that can help the country to achieve the socio-economic goals that you and your government have set. I thank you most sincerely for the very valuable time you have given.

I once again thank every one of you for attending this function.

January 29, 1975

jg

INCOMING CABLE

DISTRIBUTION:

Mr. Cheek / E 1039

G-7

ZCZC 248423 RC003 PDB1275 RML9354 KNY927 BDS479/3

URWT HL INBX 013

SECUNDERABAD 18/17 3 1830

Feb 3, 1975

1975 FEB -6 AM 8:19
COMMUNICATIONS
SECTION

RECEIVED

LT

INTBAFRAD

WASHINGTONDC

CHEEK REURTEL WILL EXPECT COULTER ICRISAT ETA MARCH TWELVE STOP

REGARDS

CUMMINGS CRISAT SECUNDERABAD

COL LT

D-21
VCC G-7

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: FEBRUARY 3, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366
(3592)

COUNTRY: INDIA

TEXT:
Cable No.:

LT/RCA

RE BUKAR SHAIB LETTER DECEMBER TWELVE TO YOU ON NIGERIAS 1975
CONTRIBUTION TO ICRISAT WE ARE TAKING FULL SUM OF 160 ^H THOUSAND DOLLARS
EQUIVALENT TO BE PART OF YOUR RESTRICTED CORE BUDGET AS ITS USE HAS
BEEN DEFINED BY DONOR

REGARDS

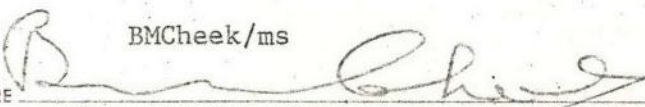
CHEEK

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME: Bruce M. Cheek

DEPT. BMCheek/ms

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)


REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

For Use By Communications Section

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: 

OUTGOING WIRE

TO: CUMMINGS
ICRISAT
SECUNDERABAD

DATE: FEBRUARY 3, 1975

CLASS OF
SERVICE: ~~TELEX: ICRISAT 015-366~~
(3592)

COUNTRY: INDIA

TEXT:
Cable No.:

THANKS YOUR LETTER JANUARY TWENTYONE ON ICRISAT CONSTRUCTION PROGRAM
AND BOARD PROPOSALS ON SECOND ROUND BIDS STOP APPRECIATE SUCCESS IN
SECURING LOWER BIDS AND NEED TO PROCEED PROMPTLY AND ALSO DESIRABILITY
FULL IMPLEMENTATION OF PROGRAM STOP GIVEN YOUR VISIT WASHINGTON WOULD
LIKE TO DISCUSS MATTERS BEFORE AWARD OF CONTRACTS OR FINAL DETERMINATION
CONSTRUCTION PROGRAM AND PRIORITIES STOP PLEASE INFORM WHEN BID OFFERS
EXPIRE AS WE EXPECT SEE YOU FEBRUARY EIGHTEEN AS INDICATED YOUR DECEMBER
TRAVEL SCHEDULE MEMO STOP QUESTIONS TO BE DISCUSSED INCLUDE PRIMO YOUR
REQUEST CEILING FOR ICRISAT EXPENDITURES AS AGREED APRIL AND OCTOBER 1974
BE RELAXED SECUNDO FIRMNESS OF ESTIMATE OF THREE POINT FIVE MILLION DOLLARS
TO COVER ADDITIONAL COSTS INCLUDING QUESTION ADEQUACY TEN PERCENT PRICE
CONTINGENCY COMMA ESCALATION PROVISIONS PROPOSED CONTRACTS AND LIKELY
INFLATION TRENDS AND EXPLANATION OF PHYSICAL AND PRICE DIFFERENCES FROM
INITIAL PLAN TERTIO CURRENT EXPECTATION TOTAL 1974 to 1977 BUDGET AND
HOW YOU ENVISAGE BREAKDOWN SPENDING BETWEEN YEARS AND BETWEEN OPERATIONS
AND CAPITAL ACCOUNT QUARTO ^{WHEN} WOULD ADDITIONAL FUNDS BE REQUIRED AND WHAT

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE _____
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: MLejeune/BMCheek/ms/G7

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

c.c. Messrs. Baum
David Lewis
Johanson/Stam
Ruddy

For Use By Communications Section

Checked for Dispatch: _____

OUTGOING WIRE

TO: CUMMINGS
CRISAT
SECUNDERABAD

DATE: FEBRUARY 3, 1975

CLASS OF
SERVICE: TELEX: ICRISAT 015-366
(3592)

COUNTRY: INDIA

TEXT:
Cable No.:

Page 2

SUGGESTIONS YOU HAVE ON NEW FUNDING FOR EXAMPLE YOUR RECENT LETTER TO
KRESGE RE LIBRARY FUNDING STOP QUINTO ON CAPITAL PROGRAM WOULD LIKE
DISCUSS CASE FOR PROVIDING RENTAL HOUSING FOR SOME STAFF AT LEAST AS
TEMPORARY MEASURE AND ALSO REASONS FOR SUPPORT STAFF NEEDING ONSITE HOUSING
SEXTO COMPARISON OF DESIGN CHANGES WITH THOSE WE SUGGESTED INCLUDING ANY
REDUCTION GROSS CONSTRUCTION AREA ~~8000~~ AND REVISED COST PER SQUARE FOOT
STOP SEPTIMO ANTICIPATED STARTING AND COMPLETION DATES FOR CONSTRUCTION STOP
GRATEFUL YOUR TELEXING OR BRINGING INFORMATION ON ABOVE SUBJECTS FOR DISCUSSION
HERE STOP SINCE BAUM AND EYE WILL BE AWAY WEEK OF FEBRUARY SEVENTEEN WOULD
APPRECIATE IF YOU COULD EXTEND WASHINGTON STAY THROUGH MONDAY TWENTYFOURTH

REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: MLejeune/BMCheek/ms/G7

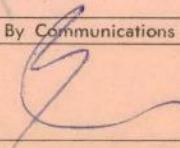
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David Lewis
Johanson/Stam
Ruddy

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

CHATTING
CRISTAT
SECURITY/READ

DATE: FEBRUARY 3, 1975

CLASS OF SERVICE: TELTEL; TCRISAY 015-366
(3532)

COUNTRY:

INDIA

TEXT:
Cable No.

Page 1

SUGGESTIONS YOU HAVE ON NEW FUNDING FOR EXAMPLE YOUR RECENT LETTER TO
KNESSE RE LIBRARY FUNDING STOP QUIND ON CAPITAL PROGRAM WOULD LIKE
DISCUSS CASE FOR PROVIDING RENTAL HOUSING FOR SOME STAFF AT LEAST AS
TEMPORARY MEASURE AND ALSO REASONS FOR SUPPORT STAFF NEEDING ON SITE HOUSING
SIXTH COMPARISON OF DESIGN CHANGES WITH THOSE WE SUGGESTED INCLUDING ANY
REDUCTION GROSS CONSTRUCTION AREA ~~AND~~ AND REVISED COST PER SQUARE FOOT
STOP SEPTIMO ANTICIPATED STARTING AND COMPLETION DATES FOR CONSTRUCTION STOP
GRATEFUL YOUR TALKING ON BRINGING INFORMATION ON ABOVE SUBJECTS FOR DISCUSSION
HERE STOP SINCE BAHU AND EYE WILL BE AWAY WEEK OF FEBRUARY SEVENTEEN WOULD
APPRECIATE IF YOU COULD EXTEND WASHINGTON STAY THROUGH MONDAY TWENTYFOURTH

REGARDS
JLLEWIS

NOT TO BE TRANSMITTED

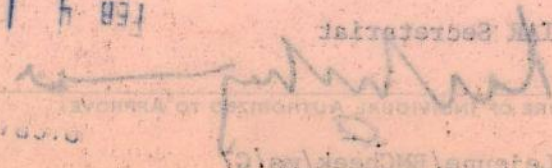
AUTHORIZED BY:

Michael L. Lejeune

POST:

COMM. Secretariat

SIGNATURE:



REFERENCE:

MLLejeune/ENGLISH/MS/CY

ORIGINAL (File Copy)

REMARKS AND COPY DISTRIBUTION:

COMMUNICATIONS
FEB 4 1 41 PM 1975

David Lewis
Johannson/82m
Huddy

For use by Communications Section

Checked for Original

(Indicate the number of copies to be made)

G7

Those Listed Below

January 31, 1975

Bruce M. Cheek, CGIAR Secretariat

ICRISAT - Revised Construction Bids

1. Attached is a report from ICRISAT on its review of the new tenders for its construction program. Some real economies appear to have been achieved, but there is still a cost over-run of at least \$3.5 million on capital account and a number of technical questions to be considered. Most of these points are covered in Warren Baum's note on his initial reactions to the incoming letter of January 21, 1975.
2. In addition, there is the question of timing with respect to the newly proposed contract awards. Dr. Cummings, Director General of ICRISAT leaves India on February 5 and will be in Washington on February 18 for several days. We would want to consider any possible awards with him in mid-February, including whether the proposed awards would prejudice the \$33 million ceiling set for ICRISAT's 1974-78 capital and operating expenditures.
3. I propose to cable Cummings on Monday (i.e. prior to his 2/5 departure) asking him to bring certain data based on Baum's questions and any you think to add (or by way of amending Baum's). At the same time, I would ask the deadline of validity for the bid offers recently considered by his Board.
4. I would appreciate your comments on Monday.

To: Messrs. David Lewis
Michael Ruddy
K. M. Thint
R. Johnson

Johansen

c.c. (memo only) Mr. Baum
Mr. Lejeune

BMCheek/ms/G7



G-7.

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

January 30, 1975

Mr. Michael LeJeune, Executive Secretary
Consultative Group on Int'l Agril. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. LeJeune,

You are perhaps aware that the Governing Board of ICRISAT has three members nominated by the Consultative Group on International Agricultural Research and three successors are likewise to be nominated when the terms of these persons expire. The three members designated by the Consultative Group are Dr. A.R. Melville of the U.K., Dr. Klaus Lampe of the Federal Republic of Germany, and Dr. D. Wynne Thorne of the U.S.A.

Dr. Melville's three year term will expire in April 1975. Dr. Melville has been an extremely valuable member of the Board and he has been serving as an active member of its Executive Committee. At its recent meeting the Board considered the question of membership of those members whose terms expire in April 1975, and authorized me to convey to you their sentiments to the effect that they would be most happy if the Consultative Group should decide to request Dr. Melville to serve on the Board for an additional three-year term. We would appreciate it very much if you will take this matter under consideration and let us know your decision with reference to this position on the Board for the next three-year period. For your information, the Executive Committee of the Board is scheduled to have its next meeting in Hyderabad May 22-24, 1975.

Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

SECTION
COMMUNICATIONS
1812 FEB 10 PM 3:12

RWC:jg

RECEIVED

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



Phones : City Offices : 72081, 72028
Laboratory : 38028
Farm : 38878
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 018-388

CITY OFFICE :
1-11-286, Begumpet,
Hyderabad-500016, A. P., India.

January 30, 1975

Mr. Michael LeJeune, Executive Secretary
Consultative Group on Int'l Agric. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. LeJeune,

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Sincerely yours

Ralph W. Cummings
Ralph W. Cummings
Director

SECTION
COMMUNICATIONS
1975 FEB 10 PM 3:15

RECEIVED

RWC:jg

UNITED NATIONS
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT

866 UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

TELEPHONE: 754-1234

CABLE ADDRESS: UNDEVPRO • NEW YORK

REFERENCE: GLO/74/005

27 January 1975

Dear Ralph,

..... I take pleasure in sending you herewith one of the three signed copies of the Contract between ICRISAT and UNDP for the Cooperative Programmes of Research and Training for the Improvement of Sorghums and Millets in West Africa. As I already informed you in my cable of today's date, this Contract enters into force with the signature date by UNDP which is 27 January 1975. As of that date, you are authorized to implement the programme in accordance with the terms of the Contract.

I am most grateful for your letter of 20 January 1975, and in accordance with your request I will today ask our finance service to effect transfer of the advance you requested for US\$25,000, as per instructions received from you.

We are now making legal arrangements with the governments concerned, and are sending you the relevant correspondence. I would appreciate it if from here on forward, you would keep the Resident Representatives in Nigeria, Niger, Upper Volta and Senegal informed of your activities as they will appreciate it and can also be helpful should you require their services.

The arrangements you propose on initial steps to be taken for the implementation of the programme are acceptable to us, and I am agreeable to have the language training charged to the project.

I am pleased that we will have a further opportunity within the framework of this project to continue our cooperation with you, which, needless to say, has at all times been a pleasure and privilege.

With best personal regards.

Yours sincerely,

William T. Mashler
Director

Division for Global and Interregional Projects

Dr. Ralph W. Cummings
Director, International Crops Research
Institute for the Semi-Arid Tropics
1-11-256, Begumpet
Hyderabad-16, A.P., India

PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT



UNITED NATIONS
DEVELOPMENT PROGRAMME

888 UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

TELEPHONE: 724-1234

CABLE ADDRESS: UNDEVELOP - NEW YORK

REFERENCE: DDA/74/505

27 January 1975

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With best personal regards,

Yours sincerely,

William T. Nashler
Director

Director for Technical and Interregional Projects

RECEIVED
1975 JAN 31 AM 11:20
INCOMING MAIL UNIT

Dr. Ralph W. Cummings
Director, International Crop Research
Institute for the Semi-Arid Tropics
1-11-256, Begumpet
Hyderabad-16, A.P., India



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

G-7

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

January 24, 1975

Mr. Michael LeJeune, Executive Secretary
Consultative Group on International Ag. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. LeJeune,

At Harold Graves' suggestion sometime ago, I have been in contact with the Kresge Foundation with respect to possible support for the ICRISAT library. They indicated that applications or submissions would be received only during the period January through March. I am enclosing for your information a copy of my request to the Kresge Foundation for a grant of \$350,000 for the Institute's library. Indications are that we may not know about the fate of this request before sometime in mid-year.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

RWC:jg

INCOMING MAIL UNIT
JAN 31 PM 1:14
RECEIVED

INTERNATIONAL GROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



Phones : City Offices : 75091, 75028
Laboratory : 38028
Farm : 38078
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-388

CITY OFFICE :
1-11-288, Begumpet,
Hyderabad-500016, A.P., India.

January 24, 1975

Mr. Michael Lelanne, Executive Secretary
Consultative Group on International Ag. Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. Lelanne,

At Harold Graves' suggestion sometime ago, I have been in contact with the Kresge Foundation with respect to possible support for the ICRISAT library. They indicated that applications or submissions would be received only during the period January through March. I am enclosing for your information a copy of my request to the Kresge Foundation for a grant of \$350,000 for the Institute's library. Indications are that we may not know about the fate of this request before sometime in mid-year.

Very truly yours,

Ralph W. Cummings
Ralph W. Cummings
Director

RWC:jg

RECEIVED
1975 JAN 31 PM 1:14
INCOMING MAIL UNIT

Mr. Michael Lefune

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS,
1-11-256, BEGUMPET,
HYDERABAD 500016, A.P., INDIA.

January 24, 1975

Dr. William H. Baldwin, President
The Kresge Foundation
2401 W. Big Beaver Road
Troy, Michigan 48084
U.S.A.

Dear Dr. Baldwin,

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, India, wishes to request consideration by the Kresge Foundation of a grant of \$350,000 to the Institute for the construction and equipment of the Institute's library.

The library will occupy a central place in the Institute and is a most vital facility of communication with the scientific world. It has been planned and designed to handle the collection, processing and use of over 70,000 volumes of standard scientific references, periodicals, and data collections related to the Institute's mission. It will provide abstracting and bibliographic services of the available world literature on each of the six major subjects of the Institute's program. Reprographic services will permit prompt circulation of vital reference material via microfilm, microfiche, computer, and other systems.

The library will be a focus for individual study and enrichment for ICRISAT scientists. It will serve visiting scientists, scholars, and trainees as well.

Constituted in 1972, ICRISAT is building on the proven concepts for scientific progress pioneered in the international institutes that launched the Green Revolution. The enclosed bulletin "International Research in Agriculture" provides information on the first eight of these institutes. ICRISAT was created with the major objective of bringing to the people of the seasonally dry semi-arid tropical regions of the world the tools and impact of modern science to improve the levels, quality, and dependability of their food supplies. ICRISAT and its mission are described further in the enclosed bulletin "This is ICRISAT".

ICRISAT is complementary to these other institutes and is designed to serve the interests of some 500 million people who must wrest their food supply from tillage of small farms, with limited capital resources,

in harsh and uncertain environments. Famine has hit large segments of such groups in recent years, especially in the Sahelian and Sudanian zones across Africa, but to a degree also in South Asia. These people desperately need help in improving their prospects for a dependable food supply of good nutritional quality and it is the Institute's mission and purpose to assist in providing the basis for such assurance.

Field experimental work was initiated immediately upon its constitution in July 1972 while longer range plans were being developed for its basic physical plant, staff were being recruited, and linkages with national and regional programs relevant to its mission were being forged in various portions of the world. The major food crops with which the Institute is concerned are sorghum, millet, pigeonpeas, chickpeas, and groundnuts. At the same time, farming systems designed to make optimum use of the crops, soils, available water, and human resources in these areas are being studied intensively.

About half of its principal core professional staff have been assembled and plans for its headquarters building program are now complete. The Foundation Stone for its building program was laid by the Prime Minister of India on January 11, 1975. Building will begin promptly with a target date for completion in late 1976. By that time, the headquarters staff is expected to be up to near full strength. Within this same period a very substantial network of cooperative projects in Africa, Central and South America, East Asia, as well as in India and the Near East is being developed.

The total ICRISAT CENTER as indicated in the enclosed booklet is to consist of a group of laboratories, plant growth facilities, service buildings and shops, the library, an administration building, hostels and dining facilities for scholars, visiting scientists, and trainees, a recreation center, and housing for a portion of the senior scientific and support staff.

The Institute librarian was employed in late 1973. Subscriptions to a substantial list of the important scientific and professional journals have been entered and a collection of the world's literature relevant to the Institute's mission is being assembled. The library will occupy a central place among the Institute buildings with convenient access from the laboratories, the administration building, the hostels for visiting scholars and trainees and the staff residences.

ICRISAT enjoys very broad support from the international community. The Ford Foundation, acting on behalf of the Consultative Group on International Agricultural Research, was entrusted with initial responsibility for its development phase, pending the Constitution of its Governing Board. After establishment, the Institute has operated independently under a distinguished international Governing Board for more than two years. Major financial support now comes from fifteen agencies and governments, namely,

3

The World Bank, the United Nations Development Program, the United Nations Environmental Program, the International Development Research Centre of Canada, and the Governments of the U.S.A., Canada, the United Kingdom, Switzerland, the Federal Republic of Germany, Belgium, The Netherlands, Norway, Sweden, Australia, and Nigeria. The budget proposal for 1975 including the new provision for initiating groundnut research (enclosed) was endorsed by the Consultative Group and the amounts indicated therein for 1975 have been subscribed. A very substantial portion of the funds required for initiating an extensive cooperative program in West Africa has been subscribed.

Tenders for the building program have been obtained and contracts will be finalized within the next few weeks for construction of as many of the buildings as financial resources permit. The design and specifications have been planned to achieve as much economy as seems reasonable consistent with good quality, utility, economical maintenance, dignity, and harmony with the environment. In spite of the best efforts, the rapid worldwide inflation of the recent past has affected costs to the extent that some of the very essential components of the building program will have to be postponed unless additional funds can be found. A grant from the Kresge Foundation for the library would be especially helpful at this time.

ICRISAT has been given tax exempt status by the U.S. Internal Revenue Service as a publicly supported institution under Section 501(c)(3) of the Internal Revenue Code (copy of notification enclosed).

The entire proposed building program of the Institute has been fully endorsed by its Governing Board and the library has been accorded a high priority within this program. The projected cost of the project is based on firm tenders by reputable contractors. Basic construction costs, including civil, plumbing, electrical, and air conditioning works, architectural services, supervision, and minor contingencies will be approximately \$300,000. An additional amount of \$50,000 will be needed for furnishings and equipment.

The Government of India has provided an excellent tract of 3500 acres of good land for the headquarters site on a 99 year lease, in the first instance, at a nominal rental. The Institute was constituted as an international body and is given privileges and immunities in India as an international body under the provisions of the United Nations (Privileges and Immunities) Act of 1947. The basic financing for the Institute's program activities and for its capital development is underwritten by the members of the Consultative Group on International Agricultural Research. Contributions toward this program have been projected through 1977. The Consultative Group, to date, has indicated availability of sufficient funds for approximately eighty percent of the proposed building program. Additional funds will be required for its full development.

We earnestly request your favourable consideration of a grant of \$300,000 for the Kresge Library of this Institute.

Sincerely yours



Ralph W. Cummings
Director

Encls: as stated in attached.

Enclosures:

- 1) International Research in Agriculture.
- 2) This is ICRISAT.
- 3) ICRISAT Center.
- 4) 1975 Program and Budget Proposals.
- 5) Auditor's Report for the year ending December 31, 1973.
- 6) Copy of IRS ruling, giving ICRISAT tax exempt status.
- 7) Agreement with the Government of India.
- 8) Notification in the Official Gazette.
- 9) Constitution.



ICRISAT G7

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39676

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

22 January, 1975

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

Mueller Steam Speciality,
(Division of SOS Consolidated Inc.)
72, Jericho Turnpike, Mineola,
U.S.A.

Subject : Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs :

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organisations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and full assistance is being given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, tax-exempt, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the World, including three representing the Government of India.

Under the ICRISAT's agreement with the Government of India, no import licences are required nor does ICRISAT pay import duties. Some airconditioning equipment for our project is being ordered through Blue Star Limited, Bombay on ICRISAT's behalf for import into India by ICRISAT. ICRISAT has agreed to pay the complete c.i.f. cost of such equipment and materials in U.S. Dollars upon presentation of the required documents. Normally, ICRISAT pays all suppliers thru out the world against invoices and shipping documents. We hope that we can also handle the payment of the air conditioning materials or equipment being supplied by you in the same manner. We want to avoid issuance of letters of credit as such, as they will cause us some inconvenience and delays on this end and would increase our total costs.

If you would like to confirm ICRISAT's credit position, we would invite you to contact Mr. Harold Graves, Executive Secretary, Consultative Group on International Agricultural Research (CGIAR), World Bank, 1818 H.St. NW, Washington DC 20433, USA., Telephone (202) 477-3592, or Mrs. Joan R. Murray, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212) 883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)



Phones : City Offices : 72091, 72828
Laboratory : 38029
Farm : 38878
Grams : CRISAT, SECUNDERABAD.
Telex : ICRISAT 015-288

22 January, 1975

CITY OFFICE :
1-11-288, Begumpet,
Hyderabad-500018, A. P., India.

Muelier Steam Speciality,
(Division of SCS Consolidated Inc.)
72, Jericho Turnpike, Mineola,
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RECEIVED
JAN 29 1975
INCOMING MAIL UNIT
JAN 8 1975

Page # 2

We would like to take this opportunity to remind you that all invoices should be made out in the name of the Director, ICRISAT, 1-11-256, Begumpet, Hyderabad : 500 016, A.P., India. Contrary to what Blue Star may have indicated to you along with their order to you, the Blue Star Order Number should not appear on any package nor should the name BLUE STAR appear on any invoices or on any shipping documents. It is imperative that these instructions be followed very strictly as we want to avoid any difficulties with Indian Customs and other Government formalities.

In closing, we would request that you allow us to pay you according to our normal procedures in order to avoid the additional cost and inconvenience of letters of credit. If you do have any questions, please feel free to contact us directly.

Sincerely


Ralph W. Cummings
Director

cc: ✓ Mr. Harold Graves, World Bank, Washington DC.
Mrs. Joan R. Murray, IIE., New York
Vastu Shilpa/J.A. Stein & Associates
Blue Star Limited, Secunderabad/New Delhi/Bombay
RV/OPS/KPN/ADL

ADL:ss



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 38029

Farm : 39878

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 018-368

21 JAN 1975

CITY OFFICE :

1-11-258, Begumpet,

Hyderabad-500018, A. P., India.

Mr. Warren Baum, Chairman/Mr. Michael LeJeune, Secretary
The Consultative Group on International Agricultural Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Sirs:

The Governing Board for ICRISAT, at its meeting in Hyderabad, January 9 and 10, 1975, reviewed the tenders received for the ICRISAT building program, and authorized the Director to proceed promptly with entering into contracts for construction of the buildings and for physical plant development insofar as could be achieved within the limits of expected and programmed budget availability. In spite of the fact that the every reasonable effort to achieve economies through modification of specifications and broadening the base of tendering and competition, the worldwide rapid inflation of costs of construction and equipment have made it impossible to provide for the entire building program within the financial ceilings imposed by the Consultative Group, at a meeting of the ICRISAT sub-committee on April 4 and 5, 1974. At this meeting, the Institute was instructed (copy attached) to use a ceiling figure for the present of \$33 million as a basis for planning of expenditures on capital and operating expenses over the four year period 1974-1977. Under this ceiling restriction, after reserving the necessary funds for the planned program operations, equipment, and site development, and making reasonable provision for contingencies, it is evident that several very essential components of the Institute's building program would have to be deferred until a later date. The Board was unanimous in its view that this would pose a very serious handicap to the Institute's research program and would slow down significantly its rate of progress toward the achievement of its program goals and its mandate for improving the food supply position for the people of the semi-arid tropics. Among the major items which would have to be deferred are one laboratory block, one trainee hostel block and a large segment of the housing for professional and support staff. The Board also felt that it may be possible to obtain additional funds from several possible sources provided the ceiling imposed by the Consultative Group were relaxed. The Board, therefore, requests that in view of the above, the Consultative Group may relax this present

ceiling limitation and that additional funds beyond those presently pledged by its members be sought to enable the Institute to complete its physical plant just as rapidly as possible and maintain its forward momentum undiminished. It appears that additional funds of the order of approximately \$3.5 million will be required. Relaxation of such limitations in the near future could enable ICRISAT to take advantage of the recent tenders in case this should prove advantageous.

By way of information, I shall review the steps which have been taken up to the present time and outline the present position. Tenders were invited on May 20, 1974 from a pre-selected list of civil, electrical, plumbing, and air conditioning contractors whose reputation and capacity for work had been judged by a distinguished panel to be such as to make them able to undertake the entire project and complete it within a reasonable time limit. Although all these pre-selected contractors had indicated their interest in tendering, the uncertainty of conditions and the fact that some were already making commitments up to their capacity elsewhere, including projects in the Arab countries around the Persian Gulf, resulted in some withdrawals and a disappointing degree of competition. The lowest tenders received were reviewed by the Board's Executive Committee and were considered unreasonably high. Efforts by the architects to negotiate prices to an acceptable level were not successful and all tenders, with the exception of that for air conditioning were rejected.

The architects were requested to review the specifications with a view to determine what economies could be achieved toward austerity without severe damage to the overall quality and economy of maintenance. These points were reviewed carefully by the Institute's administration and by the Executive Committee, and while not considered sufficient to enable the Institute to proceed with the contractors then tendering, they were incorporated into a revised set of specifications. The project was then subdivided into eight major groups which would permit tendering by a wider range of contractors, including some who might be capable of doing satisfactory work on a smaller project but who might not have the capacity to carry out the entire project within a reasonable time limit.

On this basis the project was re-advertised in the leading newspapers of wide circulation and in the local press. Approximately 65 civil contractors and very substantial numbers of plumbing and electrical contractors responded indicating their interest in tendering on various portions of the project. A new panel was established by the Governing Board to review the qualifications of these contractors and to pre-select the list who would be invited to tender. Tender invitations were issued in late October and tenders were received and opened on December 11 and 12. The competition in this second tender exercise was much more satisfactory and a review of the tenders indicate a reduction of approximately 25% below the costs which would have been indicated by the lowest tender received in July. It is estimated that approximately one-fourth of this reduction was achieved by a modification in specifications and that the remainder was realized as a result of lower prices on the unit rates.

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

ICRISAT Donors Meeting

April 4-5, 1974
Washington, D. C.

Minute

AD RECEIVED	17 APR 1974
<i>File</i>	

1. The donors and other parties interested in the establishment of ICRISAT^{1/} met on April 4 and 5 to discuss the overall financing of their total budget during the period 1974-77. The meeting fully endorsed the priority of the center and agreed that the basic concern should be to get the experimental program fully underway as expeditiously as possible. Starting from this premise the following was agreed:

2. At this stage, ICRISAT appears to be assured of \$33 million for the budget (operating and capital) for 1974 through 1977. This should be taken as an overall budgeting ceiling for the time being. The donors appreciate the foresight of the ICRISAT management in procuring in advance certain key construction materials. Considering past experience, accentuated by the current inflationary situation, the donors believe that a substantial contingency allowance is necessary.

3. A number of major donors will in fact have difficulty in committing funds for the capital budget unless the budget includes adequate contingency estimates. They wish to apply IBRD guidelines in this regard. The Secretariat is prepared to assist in this matter.

4. The donors hope that (a) any budget reductions will attempt to avoid cuts in direct expenditures on research, and (b) the ICRISAT management will consider, among the savings alternatives, the possibility of deferrals in the capital account areas identified by the review carried out on behalf of the CGIAR by its Secretariat.

5. The donors recognize that CGIAR members should make every effort to adjust their contributions to the CGIAR program to take account of inflation. They also urge the IBRD to pursue further its earlier initiatives to deal with the cash flow problem for the capital construction period of ICRISAT.

^{1/} A list of participants is attached.

Meanwhile, the Institute has proceeded with purchase of steel and a number of other items of equipment and building materials including electric cables, sheet metal for duct work, etc. so as to effect important savings in costs and reduce delays in obtaining such essential construction materials.

The Institute management and its Governing Board are unanimous in their view that all the items in the proposed building program are essential and must be provided as soon as possible. At the same time, they have established a priority listing (primarily on a time sequence assumption), putting at the top of the list those items which cannot be deferred under any circumstances and those at or near the bottom of the list which may have to be deferred for a short period of time, if absolutely necessary, due to insufficiency of funds and whose deferral for a short period of time would slow down the program progress least. The priority list is attached. It is again emphasised that the administration and Board feel that deferral of any items in this list will be a serious handicap to the Institute.

The Governing Board and the Institute management believe that every possible measure has been taken to bring the costs of development of ICRISAT's physical plant to the most economical level possible and that the entire program is essential. The unusual world situation has been entirely beyond our control. Except for the unusual circumstances encountered during the last two years, the physical plant could have been completed within the budgets presented earlier. We, therefore, earnestly request that the ceiling on commitments during the period immediately ahead be relaxed, giving us the freedom to seek additional funds, beyond those currently indicated, to permit development of the entire physical plant. We further request your assistance, to the full extent possible, in obtaining the necessary funds. The members of our Governing Board are likewise prepared to assist with efforts to locate and obtain additional funds.

Another matter, which we have discussed earlier, and which will soon need attention is that of assuring funds for bridging possible shortfalls on fund availability during the construction period. It now appears that this may not be necessary in 1975 but may be required in 1976. We hope that arrangements can be made to provide this backup assurance.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

Att:

TABLE I

January 19, 1975

ICRISAT INSTITUTIONAL BUILDINGS & STAFF HOUSING.

SUGGESTED PRIORITIES OF CONSTRUCTION AND ESTIMATED COSTS

(Exchange Rate Rs.7.50 = \$1)

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
1	-	-	A/C Contract imported equipment cost (CIF/BOMBAY) committed	55,95,893*	746,119	746,119	746,119
2			<u>EXTERNAL WORKS & SERVICES</u>				
	-	804	Site Grading)				
	-	804	Roads)				
	-	803	Sewage Lagoons) Enc. "A"	30,43,850	405,846		
	-	702	Playing Fields and)				
	-	703	Tennis Courts)				
	II	801	Water Tank - Overhead	13,90,871	185,449		
	II	811	Water Tank - Underground)				
	II	810	Cooling Tower (cost shown)				
			combined here but priority)	2,59,785	34,638		
			at lower point))				
	-	-	External Plumbing (Contract)	20,22,001	269,680		
	-	-	Special Items (External Plumbing) Enc. "B"	8,30,800	110,733		
	-	-	External Electrics (Contract)	5,37,592	71,679		
	-	-	-Do- (Substation O.P. Equipment Enc. "C"	47,74,000	636,533		

*Represents imported equipment cost (A+B of Blue Star Contract) CIF, Bombay.

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
	-	-	External Electrics (Overhead Ring Main)	8,20,000	109,333		
	-	-	Telephones, SIS etc. Enc "D"	25,00,000	333,333	2,157,224	2,903,343
3	V	401	Farm Services/Physical Plant Services Units	38,10,797	508,106		
	V	206	Warehouse (Cost included in 14)	-	-		
	VI	205	Workers Canteen	13,18,684	175,825	683,931	3,587,274
4	VI	308	Crop Work Area including Crop Drying Facility and Refrigerated Seed Storage	35,84,623	477,950	477,950	4,065,224
5	II	400	Utility Service Building	17,91,409	238,854	238,854	4,304,078
	II	810	Cooling Tower (Cost included in 2 above)	-	-		
6	III	300	Laboratory West - I	38,06,462	507,528		
	III	313	Lab (Main) entrance	2,44,117	32,549		
	III	302	Laboratory West - III	37,56,224	500,830		
	-	812	Rainwater Collection Tank (Cost included in 2 above)				

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
-	-	805	Neutralisation Plant (Cost included in 2 above)	-	-		
	V	813) 210)	Gas Cylinder Stores	70,599	9,413		
	VI	314	Workers Entrance (Telephone Office)	5,82,655	77,687		
	VI	308	Crop Work Area (Main Work Area) (Cost included in 4 above)	-	-		
			Lab Benches (for 2 labs)		208,333**	1,336,340	5,640,418
7	IV	500	Dormitory (North)	65,83,340	878,445		
	IV	502	Flatlets	34,41,154	458,820		
	III	306) 307)	Trainee Centres	8,73,914	116,522	1,453,787	7,094,205
8	I	200	Administration	35,58,872	474,516		
	I	202	Auditorium	19,58,320	261,109	735,625	7,829,830
9	I	204	Dining Centre	27,64,729	368,631		
			Kitchen Equipment	25,00,000	333,333	701,964	8,531,794
10	VII	203	Library	18,86,922	251,590	251,590	8,783,384
11	IX	610	Housing - Essential Support Staff (22 Units)	33,97,778	453,037**	453,037	9,236,421

**Estimate. Tenders not yet available.

No.	Tender Group No.	Bldg.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	US \$ Equivalent		
12	VII	602	Housing - International Staff (10 units)	36,56,490	487,532**	487,532	9,723,953
13	VI	309	Plant Growth Facility	20,30,429	270,724		
		311	Screen House)	16,84,800	224,640**	495,364	10,219,317
		310	Green House)				
14	V	206	Warehouse)				
		207	Volatile Chemical Store)				
		208	Chem./Fertiliser Store)	11,38,479	151,797	151,797	10,371,114
		211	Herbicide Store)				
15	V	800	Gate House	97,377	12,984	12,984	10,384,098
16	III	301	Laboratory West	38,17,575	509,010		
			Lab Benches (for 3rd lab)		104,167* *	613,177	10,997,275
17	II	209	Laundry	2,74,295	36,573		
			Laundry Equipment	2,00,000	26,667	63,240	11,060,515
18	IX	610	Housing - Essential Support Staff (23 Units)	35,52,222	473,630**		
	VIII	602/600	Housing - International Staff (10 Units) including Director's Residence (1 Unit)	41,56,490	554,199**	1,027,829	12,088,344

**Estimate. Tenders not yet available

Items 16-23 cannot be accommodated within ceiling limits established by Consultative Group in April '74.

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	US \$ Equivalent		
19	IV	501	Dormitory (South)	65,88,340	878,445	878,445	12,966,789
20	IV	700	Guest House/Recreation Centre	20,09,912	267,988		
		701	Swimming Pool	1,85,869	24,783	292,771	13,259,560
21	X	620/ 621	Housing - Other Support Staff	15,00,000	200,000**	200,000	13,459,560
22	-	704	Squash Court	-	-		
23	-	312	Plant Quarantine*	5,00,000	66,440**	66,440	13,526,000

Thirty percent (30%) needs to be added to the cumulative construction cost to cover Architects fees, supervision, landscaping and consultants, furniture (10% of cost of buildings) and contingency (10%), thus to arrive at the Total Construction Cost.

*The plant quarantine unit assumes a very high priority but is placed here in the priority listing since separate arrangements are being considered to provide these facilities.

VL:Vrr

**Estimate. Tenders not yet available.

No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
		Rs.	US \$ Equivalent		
	Total cumulative cost as per previous page	-	-	-	13,526,000
24	Additional General Costs:	-	-	3,224,000	16,750,000
	Architect fees				
	Supervision				
	Furniture and furnishings				
	Interior decoration				
	Landscaping				
	Consultants				
	Contingencies				
25	Equipment other than that which is included as fixed equipment in Buildings (Est)	-	-	4,000,000	20,750,000



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(I C R I S A T)

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Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

21 JAN 1975

✓ Mr. Warren Baum, Chairman/Mr. Michael LeJeune, Secretary
The Consultative Group on International Agricultural Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Sirs:

The Governing Board for ICRISAT, at its meeting in Hyderabad, January 9 and 10, 1975, reviewed the tenders received for the ICRISAT building program, and authorized the Director to proceed promptly with entering into contracts for construction of the buildings and for physical plant development insofar as could be achieved within the limits of expected and programmed budget availability. In spite of the fact that the every reasonable effort to achieve economies through modification of specifications and broadening the base of tendering and competition, the worldwide rapid inflation of costs of construction and equipment have made it impossible to provide for the entire building program within the financial ceilings imposed by the Consultative Group, at a meeting of the ICRISAT sub-committee on April 4 and 5, 1974. At this meeting, the Institute was instructed (copy attached) to use a ceiling figure for the present of \$33 million as a basis for planning of expenditures on capital and operating expenses over the four year period 1974-1977. Under this ceiling restriction, after reserving the necessary funds for the planned program operations, equipment, and site development, and making reasonable provision for contingencies, it is evident that several very essential components of the Institute's building program would have to be deferred until a later date. The Board was unanimous in its view that this would pose a very serious handicap to the Institute's research program and would slow down significantly its rate of progress toward the achievement of its program goals and its mandate for improving the food supply position for the people of the semi-arid tropics. Among the major items which would have to be deferred are one laboratory block, one trainee hostel block and a large segment of the housing for professional and support staff. The Board also felt that it may be possible to obtain additional funds from several possible sources provided the ceiling imposed by the Consultative Group were relaxed. The Board, therefore, requests that in view of the above, the Consultative Group may relax this present

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CITY OFFICE :
1-11-288, Begumpet,
Hyderabad-500016, A.P., India.

21 JAN 1975

Mr. Warren Baum, Chairman/Mr. Michael Lelanne, Secretary
The Consultative Group on International Agricultural Research
1818 H. Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Sirs:

The Governing Board for ICRISAT, at its meeting in Hyderabad, January 9 and 10, 1975, reviewed the tenders received for the ICRISAT building program, and authorized the Director to proceed promptly with entering into contracts for construction of the buildings and for physical plant development insofar as could be achieved within the limits of expected and programmed budget availability. In spite of the fact that the every reasonable effort to achieve economies through modification of specifications and broadening the base of tendering and competition, the worldwide rapid inflation of costs of construction and equipment have made it impossible to provide for the entire building program within the financial ceilings imposed by the Consultative Group, at a meeting of the ICRISAT sub-committee on April 4 and 5, 1974. At this meeting, the Institute was instructed (copy attached) to use a ceiling figure for the present of \$33 million as a basis for planning of expenditures on capital and operating expenses over the four year period 1974-1977. Under this ceiling restriction, after reserving the necessary funds for the planned program operations, equipment, and site development, and making reasonable provision for contingencies, it is evident that several very essential components of the Institute's building program would have to be deferred until a later date. The Board was unanimous in its view that this would pose a very serious handicap to the Institute's research program and would slow down significantly its rate of progress toward the achievement of its program goals and its mandate for improving the food supply position for the people of the semi-arid tropics. Among the major items which would have to be deferred are one laboratory block, one trainee hostel block and a large segment of the housing for professional and support staff. The Board also felt that it may be possible to obtain additional funds from several possible sources provided the ceiling imposed by the Consultative Group were relaxed. The Board, therefore, requests that in view of the above, the Consultative Group may relax this present

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1975 JAN 28 PM 12:36

INCOMING MAIL UNIT

ceiling limitation and that additional funds beyond those presently pledged by its members be sought to enable the Institute to complete its physical plant just as rapidly as possible and maintain its forward momentum undiminished. It appears that additional funds of the order of approximately \$3.5 million will be required. Relaxation of such limitations in the near future could enable ICRISAT to take advantage of the recent tenders in case this should prove advantageous.

By way of information, I shall review the steps which have been taken up to the present time and outline the present position. Tenders were invited on May 20, 1974 from a pre-selected list of civil, electrical, plumbing, and air conditioning contractors whose reputation and capacity for work had been judged by a distinguished panel to be such as to make them able to undertake the entire project and complete it within a reasonable time limit. Although all these pre-selected contractors had indicated their interest in tendering, the uncertainty of conditions and the fact that some were already making commitments up to their capacity elsewhere, including projects in the Arab countries around the Persian Gulf, resulted in some withdrawals and a disappointing degree of competition. The lowest tenders received were reviewed by the Board's Executive Committee and were considered unreasonably high. Efforts by the architects to negotiate prices to an acceptable level were not successful and all tenders, with the exception of that for air conditioning were rejected.

The architects were requested to review the specifications with a view to determine what economies could be achieved toward austerity without severe damage to the overall quality and economy of maintenance. These points were reviewed carefully by the Institute's administration and by the Executive Committee, and while not considered sufficient to enable the Institute to proceed with the contractors then tendering, they were incorporated into a revised set of specifications. The project was then subdivided into eight major groups which would permit tendering by a wider range of contractors, including some who might be capable of doing satisfactory work on a smaller project but who might not have the capacity to carry out the entire project within a reasonable time limit.

On this basis the project was re-advertised in the leading newspapers of wide circulation and in the local press. Approximately 65 civil contractors and very substantial numbers of plumbing and electrical contractors responded indicating their interest in tendering on various portions of the project. A new panel was established by the Governing Board to review the qualifications of these contractors and to pre-select the list who would be invited to tender. Tender invitations were issued in late October and tenders were received and opened on December 11 and 12. The competition in this second tender exercise was much more satisfactory and a review of the tenders indicate a reduction of approximately 25% below the costs which would have been indicated by the lowest tender received in July. It is estimated that approximately one-fourth of this reduction was achieved by a modification in specifications and that the remainder was realized as a result of lower prices on the unit rates.

Meanwhile, the Institute has proceeded with purchase of steel and a number of other items of equipment and building materials including electric cables, sheet metal for duct work, etc. so as to effect important savings in costs and reduce delays in obtaining such essential construction materials.

The Institute management and its Governing Board are unanimous in their view that all the items in the proposed building program are essential and must be provided as soon as possible. At the same time, they have established a priority listing (primarily on a time sequence assumption), putting at the top of the list those items which cannot be deferred under any circumstances and those at or near the bottom of the list which may have to be deferred for a short period of time, if absolutely necessary, due to insufficiency of funds and whose deferral for a short period of time would slow down the program progress least. The priority list is attached. It is again emphasised that the administration and Board feel that deferral of any items in this list will be a serious handicap to the Institute.

The Governing Board and the Institute management believe that every possible measure has been taken to bring the costs of development of ICRISAT's physical plant to the most economical level possible and that the entire program is essential. The unusual world situation has been entirely beyond our control. Except for the unusual circumstances encountered during the last two years, the physical plant could have been completed within the budgets presented earlier. We, therefore, earnestly request that the ceiling on commitments during the period immediately ahead be relaxed, giving us the freedom to seek additional funds, beyond those currently indicated, to permit development of the entire physical plant. We further request your assistance, to the full extent possible, in obtaining the necessary funds. The members of our Governing Board are likewise prepared to assist with efforts to locate and obtain additional funds.

Another matter, which we have discussed earlier, and which will soon need attention is that of assuring funds for bridging possible shortfalls on fund availability during the construction period. It now appears that this may not be necessary in 1975 but may be required in 1976. We hope that arrangements can be made to provide this backup assurance.

Very truly yours

Ralph W. Cummings
Ralph W. Cummings
Director

Att:

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

ICRISAT Donors Meeting

April 4-5, 1974
Washington, D. C.

Minute

Received	17 APR 1974
<i>Pol. 17/4/74 Rwe</i>	

1. The donors and other parties interested in the establishment of ICRISAT^{1/} met on April 4 and 5 to discuss the overall financing of their total budget during the period 1974-77. The meeting fully endorsed the priority of the center and agreed that the basic concern should be to get the experimental program fully underway as expeditiously as possible. Starting from this premise the following was agreed:
2. At this stage, ICRISAT appears to be assured of \$33 million for the budget (operating and capital) for 1974 through 1977. This should be taken as an overall budgeting ceiling for the time being. The donors appreciate the foresight of the ICRISAT management in procuring in advance certain key construction materials. Considering past experience, accentuated by the current inflationary situation, the donors believe that a substantial contingency allowance is necessary.
3. A number of major donors will in fact have difficulty in committing funds for the capital budget unless the budget includes adequate contingency estimates. They wish to apply IBRD guidelines in this regard. The Secretariat is prepared to assist in this matter.
4. The donors hope that (a) any budget reductions will attempt to avoid cuts in direct expenditures on research, and (b) the ICRISAT management will consider, among the savings alternatives, the possibility of deferrals in the capital account areas identified by the review carried out on behalf of the CGIAR by its Secretariat.
5. The donors recognize that CGIAR members should make every effort to adjust their contributions to the CGIAR program to take account of inflation. They also urge the IBRD to pursue further its earlier initiatives to deal with the cash flow problem for the capital construction period of ICRISAT.

^{1/} A list of participants is attached.

TABLE I

January 19, 1975

ICRISAT INSTITUTIONAL BUILDINGS & STAFF HOUSING.

SUGGESTED PRIORITIES OF CONSTRUCTION AND ESTIMATED COSTS

(Exchange Rate Rs.7.50 = \$1)

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
1	-	-	A/C Contract imported equipment cost (CIF/BOMBAY) committed	55,95,893*	746,119	746,119	746,119
2			<u>EXTERNAL WORKS & SERVICES</u>				
	-	804	Site Grading)				
	-	804	Roads)				
	-	803	Sewage Lagoons) Enc. "A"	30,43,850	405,846		
	-	702	Playing Fields and)				
	-	703	Tennis Courts)				
	II	801	Water Tank - Overhead	13,90,871	185,449		
	II	811	Water Tank - Underground)				
	II	810	Cooling Tower (cost shown)				
			combined here but priority)	2,59,785	34,638		
			at lower point))				
	-	-	External Plumbing (Contract)	20,22,601	269,680		
	-	-	Special Items (External Plumbing) Enc. "B"	8,30,800	110,733		
	-	-	External Electrics (Contract)	5,37,592	71,679		
	-	-	-Do- (Substation O.P. Equipment Enc. "C"	47,74,000	636,533		

*Represents imported equipment cost (A+B of Blue Star Contract)CIF, Bombay.

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
	-	-	External Electrics (Overhead Ring Main)	8,20,000	109,333		
	-	-	Telephones, SIS etc. Enc "D"	25,00,000	333,333	2,157,224	2,903,343
3	V	401	Farm Services/Physical Plant Services Units	38,10,797	508,106		
	V	206	Warehouse (Cost included in 14)	-	-		
	VI	205	Workers Canteen	13,18,684	175,825	683,931	3,587,274
4	VI	308	Crop Work Area including Crop Drying Facility and Refrigerated Seed Storage	35,84,623	477,950	477,950	4,065,224
5	II	400	Utility Service Building	17,91,409	238,854	238,854	4,304,078
	II	810	Cooling Tower (Cost included in 2 above)	-	-		
6	III	300	Laboratory West - I	38,06,462	507,528		
	III	313	Lab (Main) entrance	2,44,117	32,549		
	III	302	Laboratory West - III	37,56,224	500,830		
	-	812	Rainwater Collection Tank (Cost included in 2 above)				

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	U.S. \$ Equivalent		
-	-	805	Neutralisation Plant (Cost included in 2 above)	-	-		
	V	813 210) Gas Cylinder Stores	70,599	9,413		
	VI	314	Workers Entrance (Telephone Office)	5,82,655	77,687		
	VI	308	Crop Work Area (Main Work Area) (Cost included in 4 above)	-	-		
			Lab Benches (for 2 labs)		208,333**	1,336,340	5,640,418
7	IV	500	Dormitory (North)	65,83,340	878,445		
	IV	502	Flatlets	34,41,154	458,820		
	III	306 307) Trainee Centres)	8,73,914	116,522	1,453,787	7,094,205
8	I	200	Administration	35,58,872	474,516		
	I	202	Auditorium	19,58,320	261,109	735,625	7,829,830
9	I	204	Dining Centre	27,64,729	368,631		
			Kitchen Equipment	25,00,000	333,333	701,964	8,531,794
10	VII	203	Library	18,86,922	251,590	251,590	8,783,384
11	IX	610	Housing - Essential Support Staff (22 Units)	33,97,778	453,037**	453,037	9,236,421

**Estimate. Tenders not yet available.

No.	Tender Group No.	Bldg.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	US \$ Equivalent		
12	VII	602	Housing - International Staff (10 units)	36,56,490	487,532 **	487,532	9,723,953
13	VI	309	Plant Growth Facility	20,30,429	270,724		
		311	Screen House)	16,84,800	224,640 **	495,364	10,219,317
		310	Green House)				
14	V	206	Warehouse)				
		207	Volatile Chemical Store)				
		208	Chem./Fertiliser Store)	11,38,479	151,797	151,797	10,371,114
		211	Herbicide Store)				
15	V	800	Gate House	97,377	12,984	12,984	10,384,098
16	III	301	Laboratory West	38,17,575	509,010		
			Lab Benches (for 3rd lab)		104,167 * *	613,177	10,997,275
17	II	209	Laundry	2,74,295	36,573		
			Laundry Equipment	2,00,000	26,667	63,240	11,060,515
18	IX	610	Housing - Essential Support Staff (23 Units)	35,52,222	473,630 **		
	VIII	602/600	Housing - International Staff (10 Units) including Director's Residence (1 Unit)	41,56,490	554,199 **	1,027,829	12,088,344

**Estimate. Tenders not yet available

Items 16-23 cannot be accommodated within ceiling limits established by Consultative Group in April '74.

No.	Tender Group No.	Bldg. No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
				Rs.	US \$ Equivalent		
19	IV	501	Dormitory (South)	65,88,340	878,445	878,445	12,966,789
20	IV	700	Guest House/Recreation Centre	20,09,912	267,988		
		701	Swimming Pool	1,85,869	24,783	292,771	13,259,560
21	X	620/ 621	Housing - Other Support Staff	15,00,000	200,000**	200,000	13,459,560
22	-	704	Squash Court	-	-		
23	-	312	Plant Quarantine*	5,00,000	66,440**	66,440	13,526,000

Thirty percent (30%) needs to be added to the cumulative construction cost to cover Architects fees, supervision, landscaping and consultants, furniture (10% of cost of buildings) and contingency (10%), thus to arrive at the Total Construction Cost.

*The plant quarantine unit assumes a very high priority but is placed here in the priority listing since separate arrangements are being considered to provide these facilities.

VL:Vrr

**Estimate. Tenders not yet available.

No.	Description	Approximate Tendered Cost		Total for Priority Group \$	Cumulative Total \$
		Rs.	US \$ Equivalent		
	Total cumulative cost as per previous page	-	-	-	13,526,000
24	Additional General Costs:	-	-	3,224,000	16,750,000
	Architect fees				
	Supervision				
	Furniture and furnishings				
	Interior decoration				
	Landscaping				
	Consultants				
	Contingencies				
25	Equipment other than that which is included as fixed equipment in Buildings (Est)	-	-	4,000,000	20,750,000



G7 Copy

INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

Phones : City Offices : 72091, 72628

Laboratory : 36029

Farm : 39678

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Bagumpet,

Hyderabad-500016, A. P., India.

January 21, 1975

Mr. S.A. Bunce
Ministry of Overseas Development
Eland House, Stag Place
London SW1E 5DP
England

Dear Mr. Bunce,

I wish to acknowledge with grateful appreciation your letter of 16th January, 1975, Reference NRR 236/222/05 confirming the pledge of the U.K. Government to ICRISAT for 1975 in the amount of £230,000. We also appreciate the unrestricted provision as between recurrent and capital expenditure for these funds which helps a great deal in providing the necessary flexibility for the Institute. The very strong support of your Government financially and of the officers of your Ministry, as well as scientists from your various research and educational institutions is of tremendous help to the development of the Institute and to progress toward the realization of its goals and mandate.

With very highest regards and sincerest appreciation, I am,

Respectfully yours

Ralph W. Cummings
Ralph W. Cummings
Director

cc.: CFB

ARM

Secretary, CGIAR

RWC:jg

SECTION
COMMUNICATIONS

1832 10H 58 AM 10: 30

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INTERNATIONAL TROPIC RESEARCH INSTITUTE
FOR THE TROPICAL TROPICS
(ICRISAT)

CITY OFFICE
1-17-100, BANGALORE
HYDRAPOUR-560016 & P. ROAD

TELEPHONE: 2301, 2302, 2303
TELETYPE: 2301, 2302
FAX: 2301, 2302
Cable: ICRISAT, BANGALORE
Cable: ICRISAT, BANGALORE

January 21, 1975



Ministry of Overseas Development
Grand House, Stag Place
London SW1E 6JH
England

Dear Mr. Binks,

I wish to acknowledge with grateful appreciation your letter of 10th January, 1975, Reference MRN 236/237/05 concerning the pledge of the U.K. Government to ICRISAT for 1975 in the amount of £150,000. We also appreciate the unrestricted provision of between recurrent and capital expenditure for those funds which are a great deal in providing the necessary facilities for the Institute. The very strong support of your Government financially and of the officers of your Ministry, as well as scientists from your various research and educational institutions is of tremendous help to the development of the Institute and to progress towards the realization of its goals and mandate.

With very highest regards and sincerest appreciation, I am,

Respectfully yours,

Ralph W. Conner
Ralph W. Conner
Director

cc: CTR
ARM
Secretary, COLAR

SECTION
COMMUNICATIONS
1975 JAN 28 AM 10:30

RECEIVED



Ministry of Overseas Development
Eland House Stag Place London SW1E 5DH

Telephone 01-622 4355 ext

G7

Dr Ralph W Cummings
Director
International Crops Research
Institute for the Semi-Arid Tropics
1-11-256 Begumpet
Hyderabad 500016, A P
INDIA

Your reference

Our reference NRR 236/222/05

Date 16 th January 1975

UK GRANT-ON-AID TO ICRISAT

I am writing to confirm the pledge given at the 5th meeting of the Consultative Group that (subject to the usual Parliamentary approval) the UK contribution to ICRISAT for 1975 will be \$230,000. These funds are unrestricted as to recurrent or capital expenditure.

The accounting/payment arrangements will remain as before. The 1975 contribution will be paid in three instalments of £76,667, £76,667 and £76,666 in mid-April, mid-August and mid-December respectively. As you know our pledges and payments are on a sterling basis so the dollar equivalents will not be known until the payments have been completed.

A copy of this letter goes to Mr Graves in Washington for information.

SECTION
COMMUNICATIONS

1012700151 6H15:52

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S A Bunce



Ministry of Overseas Development
East House, 2nd Floor, London WC1E 7EH

Telephone: 01-275 3111

27

For reference

Reference: O.D. 100/100

Correspondence: O.D. 100/100

Date: 10/10/75

IN THE MATTER OF

THE GOVERNMENT OF INDIA
AND
THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN
AND NORTHERN IRELAND

THE GOVERNMENT OF INDIA
AND
THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN
AND NORTHERN IRELAND

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1975 JAN 21 PM 12:26
COMMUNICATIONS
SECTION

**Midland Electric
Manufacturing
Company Limited**

Your ref

Our ref KTA/JM

Date 15 January 1975

Reddings Lane
Birmingham
B11 3EZ

Telephone: 021-706 3300
Telegrams: MEM Birmingham
Telex: 336269

MEM

Mr Harold Graves
Executive Secretary
Consultative Group on International Agricultural Research
World Bank
1818 H St NW
Washington DC 20433
USA

Dear Mr Graves

ICRISAT INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID
TROPICS 1-11-256 Begaumpet
Hyderabad 500016
A P India

We have received an order from the above organisation, valued at approximately £3,500, and we are at present obtaining an agreement to draw a draft at sight through The First National City Bank, in New York.

In order that we can go ahead and accept the order on this basis, we would very much appreciate information concerning the Credit status of this organisation as quickly as possible.

Yours sincerely



K T Astles
Export Sales Representative

Directors:
Dr. R. B. Sims (Chairman)
F. Basterfield (Managing)
R. F. Done BSc · R. F. Nicholas
R. C. Blythe BSc · A. Pattinson

DELTA

Electrical Division

Registered in England no. 215583
Registered Head Office:
1 Kingsway, London WC2B 6XF

Midland Electric
Manufacturing
Company Limited

Reddings Lane
Birmingham
B11 3EX
Telephone: 051-700 3300
Telex: MEM Birmingham
Tele: 333333

Your ref

Quoted: KTAJAM

Date: 15 January 1975

MEM

RECEIVED
1975 JAN 21 PM 12:13
INCOMING MAIL UNIT

Mr Harold Graves
Executive Secretary
Consultative Group on International Agricultural Research
World Bank
1818 H St NW
Washington DC 20433
USA

Dear Mr Graves

ICRISAT INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID
TROPICS 1-11-756 Begumpet
Hyderabad 500016
A P India

We have received an order from the above organisation, valued at
approximately £3,500, and we are at present obtaining an agree-
ment to draw a draft at sight through The First National City
Bank, in New York.

In order that we can go ahead and accept the order on this basis,
we would very much appreciate information concerning the Credit
status of this organisation as quickly as possible.

Yours sincerely

K T Asles

K T Asles
Export Sales Representative

DELIA

Electrical Division
Registered in England no 21863
Registered Head Office:
1 Kingsway, London WC2B 6EX

Telephone:
Mr R. B. Smith (Manager)
Mr. J. H. Smith (Secretary)
Mr. P. Jones (Mr. R. F. Nicholas)
Mr. C. Smith (Mr. A. Williams)



INTERNATIONAL CROPS RESEARCH INSTITUTE
FOR THE SEMI-ARID TROPICS
(ICRISAT)

ICRISAT
G7
CG.

Phones : City Offices : 72091, 72628

Laboratory : 36029

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Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 015-366

CITY OFFICE :

1-11-256, Begumpet,

Hyderabad-500016, A. P., India.

13 JAN 1975

Subject : Importation of Airconditioning Material
and Equipment on behalf of ICRISAT by
Blue Star Limited, Bombay, India.

Dear Sirs :

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is sponsored by the Consultative Group on International Agricultural Research (CGIAR), composed of 29 nations and/or International Organisations, including the IBRD (World Bank), FAO and the United Nations Development Program. It has the endorsement and support of the Government of India and the Andhra Pradesh State Government at the highest levels and full assistance is being given by both the Central and State Governments in its establishment and operation.

ICRISAT was established in July, 1972 at Hyderabad, Andhra Pradesh, India. This Institute has been constituted as an autonomous, international, philanthropic, non-profit, tax-exempt, research, educational and training institution, with a distinguished Governing Board consisting of representatives from throughout the World, including three representing the Government of India.

Under the ICRISAT's agreement with the Government of India, no import licences are required nor does ICRISAT pay import duties. Some airconditioning equipment for our project is being ordered through Blue Star Limited, Bombay on ICRISAT's behalf for import into India by ICRISAT. ICRISAT has agreed to pay the complete c.i.f. cost of such equipment and materials in U.S. Dollars upon presentation of the required documents. Normally, ICRISAT pays all suppliers thru out the world against invoices and shipping documents. We hope that we can also handle the payment of the air conditioning materials or equipment being supplied by you in the same manner. We want to avoid issuance of letters of credit as such, as they will cause us some inconvenience and delays on this end and would increase our total costs.

If you would like to confirm ICRISAT's credit position, we would invite you to contact Mr. Harold Graves, Executive Secretary, Consultative Group on International Agricultural Research (CGIAR), World Bank, 1818 H.St. NW, Washington DC 20433, USA., Telephone (202) 477-3592, or Mrs. Joan R. Murray, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017, USA, Telephone (212)883-8228. Both of these people will confirm that ICRISAT is a good credit risk and that you will encounter no difficulties in payment for materials and equipment supplied by you.

Page # 2

We would like to take this opportunity to remind you that all invoices should be made out in the name of the Director, ICRISAT, 1-11-256, Begumpet, Hyderabad : 500 016, A.P., India. Contrary to what Blue Star may have indicated to you along with their order to you, the Blue Star Order Number should not appear on any package nor should the name BLUE STAR appear on any invoices or on any shipping documents. It is imperative that these instructions be followed very strictly as we want to avoid any difficulties with Indian Customs and other Government formalities.

In closing, we would request that you allow us to pay you according to our normal procedures in order to avoid the additional cost and inconvenience of letters of credit. If you do have any questions, please feel free to contact us directly.

Sincerely

Ralph W. Cummings
Ralph W. Cummings
Director

cc: Mr. Harold Graves, World Bank, Washington DC.
Mrs. Joan R. Murray, IIE., New York
Vastu Shilpa/J.A. Stein & Associates
Blue Star Limited, Secunderabad/New Delhi/Bombay
RV/OPS/KPN/ADL

X This letter has since been
X mailed to additional
X refrigeration and air
X conditioning equipment
X suppliers listed in the
X attached sheet.

ADL:ss

INCOMING UNIT UNIT
1912 700 ST 60 15 15
RECEIVED

We would like to take this opportunity to thank you for all
 information should be made out in the name of the Director, FBI, 1-11-55.
 Registered, Hyderabad, 1000 G.D. A.P. India. Secondly to what Blue Star may
 have indicated to you along with their order to you, the Blue Star Order Number
 should not appear on any package nor should the name BLUE STAR appear on
 any invoice or on any shipping documents. It is imperative that these
 instructions be followed very strictly as we want to avoid any difficulties
 with Indian Customs and other Government officials.

In closing, we would request that you allow us to pay you
 according to our normal procedures in order to avoid the additional cost
 and inconvenience of letters of credit. If you do have any questions,
 please feel free to contact us directly.

Sincerely,

Ralph W. Cummings
 Director

at Mr. Harold Graves, World Bank, Washington DC.
 Mrs. Joan R. Murray, 111, New York
 Victor Shilpa/L.A. Stein & Associates
 Blue Star Limited, Secunderabad/New Delhi/Bombay
 RV/028/KVN/ADL
 This letter has since been
 mailed to additional
 registration and air
 conditioning equipment
 suppliers listed in the
 attached sheet.

ADL:ms

RECEIVED
 1975 JAN 24 PM 4:42
 INCOMING MAIL UNIT

List of additional Refrigeration & Airconditioning
Equipment Suppliers

1. Mason Industries Inc.
92-10 182nd Place
Hollis
New York 11423
U.S.A.
2. Weksler Instruments Corporation
80 Mill Road
Freeport
New York 11520
U.S.A.
3. Marsh Instrument Company
(A Unit of General Signal)
Skokie
Illinois 60076
U.S.A.
4. Westinghouse Electric Corporation
Post Office Box 2514
Grand Central Station
New York, N.Y. 10017
U.S.A.

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: BMZ
BONN

DATE: JANUARY 6, 1975

CLASS OF
SERVICE: TELEX NO. 8869452

COUNTRY: FEDERAL REPUBLIC OF GERMANY

TEXT:

Cable No.: ATTENTION TREITZ LAST MONTH COOPERATION MINISTRY KINDLY TRANSFERRED DM212500
TO INTERNATIONAL CENTER OF TROPICAL AGRICULTURE AFTER REPRESENTATION FROM
CONSULTATIVE GROUP SECRETARIAT IN MY LETTER OF NOVEMBER FOURTEEN THAT THESE
FUNDS COULD BE USED TO SPEED UP CIAT PURCHASES OF CAPITAL EQUIPMENT STOP
IT NOW DEVELOPS THAT CIATS 1974 BUDGET WAS NOT FULLY MET DUE TO SECRETARIAT
MISUNDERSTANDING OF EXACTLY WHAT FUNDS WERE AVAILABLE TO THE CENTER FROM
VARIOUS DONORS STOP CIAT NOW REQUESTS THAT RECENT GERMAN TRANSFER BE APPLIED
TO COMPLETING THE CENTERS 1974 BUDGET STOP IF YOU HAVE NO OBJECTION WE PROPOSE
TO INFORM CIAT JANUARY THIRTEEN THAT THIS USE OF FUNDS IS PERMISSIBLE STOP
REGARDS AND BEST NEW YEAR.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME Harold N. Graves

DEPT. CGIAR Secretariat

SIGNATURE *[Signature]*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *[Signature]*