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G - 7 ICRISAT 1972/74  
Vol. IV



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~~This file is closed as of  
December 31, 1974.~~

~~For further correspondence,  
please see 1975/77 files.~~

DRAFT

67  
April 30/74

TO: Mr. Robert S. McNamara  
FROM: Warren C. Baum  
SUBJECT: ICRISAT

The purpose of this memorandum is to report to you on the situation of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). This is the first Institute, you will remember, to have been formally established under the sponsorship of the Consultative Group on International Agricultural Research. The Institute is within a couple of months of awarding the initial contracts for the major part of the construction of its physical plant. As the time for awards approaches, questions may arise which will require consideration by the management of the Bank.

The Bank staff, including the Consultative Group Secretariat, in the meantime has been engaged in an intensive effort to see that a proper physical and financial plan is prepared. The effort is one of the most complicated that the Bank has undertaken as the leader of the Consultative Group.

The needs of a research institute like ICRISAT are considerable and complex. At the same time, the economic situation in India has become increasingly unstable and costs have begun to rise with unprecedented rapidity. Finally, there is the circumstance that while ICRISAT's autonomous Governing Board outlines the facilities and budget the Institute may need, it is the donors who provide the funds to meet these needs. The donors are a different set of people, and may have different opinions, from the Governing Board.



The effort of the Bank staff has taken two directions. One is to increase the funding available for ICRISAT; and prospective grants for ICRISAT have increased. There have been two special meetings of the ICRISAT subcommittee composed of Consultative Group donors (of which the Bank is chairman) to discuss ICRISAT's financial needs and how they can be met during the time when the Institute is building its basic physical facilities in Hyderabad (1974-77).

The first of these meetings was held in October 1973, the second in April 1974. The funds which seemed to be in prospect (apart from direct grants that might be made by IDA) at the time of the earlier meeting amounted to about \$24 million. At the time of the April meeting, and partly as a result of it, availabilities (again excluding direct IDA grants) had grown to about \$29 million.

A table of prospective contributions to ICRISAT is attached; it includes proposed IDA direct contributions of \$3.25 million to be made in the period 1975-77. More contributions are being sought by ICRISAT and the Secretariat, especially from Japan, the Asian Development Bank and the Kresge Foundation (which is not a member of the Consultative Group).

The staff also has been working toward the preparation of a capital plan which would adequately serve the needs of the Institute, would meet the approval of donors and fall within the limits of available financing.

The first estimates which the ICRISAT management prepared of its financial requirements during the construction period of the Institute amounted to \$29.2 million, of which \$13.4 million was for capital costs and \$15.8 million was for running expenses. This estimate was made in 1972.

Thereafter, sharp increases began to occur in the costs of construction and the price of materials. By the beginning of 1974, ICRISAT's management estimated capital costs at \$16.4 million and running expenses at \$16.2 million, giving a total cash requirement of \$32.6 million. In the Bank's view, even these increases did not take adequate account of price and other contingencies. ICRISAT's total needs, on the basis of the installations then planned, seemed to the Bank staff to amount actually to something on the order of \$36 million in the period 1974-1977.

A close study was therefore undertaken of ICRISAT's capital plans and a detailed discussion of these plans was carried on with donors. A Bank architect visited Hyderabad in January 1974 and discussed the capital plans with the Institute management and architects. A second Bank architect has made a careful study of the detailed drawings which the Institute was able to send to Washington last April. The conclusion of both architects was that in some respects the installations of ICRISAT were on too ample a scale, and that economies could be effected that would not detract from the effectiveness or the appearance of the installations proposed.

The special meeting of donors to ICRISAT in April considered both the financing and the physical planning of ICRISAT. Donors endorsed the Secretariat's calculation that about \$33 million would be available for ICRISAT's capital and operating budget in the period 1974-1977; and it was the sense of the meeting that an effective capital plan, together with running costs, could be adequately provided for within this figure.

Construction bids for ICRISAT have not been received, and the financial outlook of the Institute cannot yet be fully determined. Within



Mr. Robert S. McNamara

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the prescribed limit of \$33 million, however, ICRISAT is provisionally stating its needs as follows (in \$'000):

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Core	2600	3750	4500	5100
Capital budget	<u>3520</u>	<u>7040</u>	<u>4100</u>	<u>2390</u>
	6120	10,790	8600	7490.

It remains to be seen, however, whether a feasible capital plan can be developed within this figure.

If it can, requests and availabilities would be reasonably in balance. The Institute would receive more than it needs in the first and last years of the period 1974-77 and less than it needs in the middle two. The prospect would be as follows:

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Budget	6120	10,790	8600	7490
Funds Available	7745	8080	8490	8050
Annual Net	1625	-2710	-110	560
Cumulative Net	1625	-1085	-1195	-635.

If the bid figures received in July support these calculations, it is possible that ICRISAT's temporary deficits could be managed by a re-phasing of construction and of equipment purchases. If re-phasing, in view of the urgency of getting ICRISAT's research program fully on stream, does not appear to the donors and the management of ICRISAT to be a desirable alternative, or if the temporary deficits to be faced, in spite of the best efforts of ICRISAT and the donors, cannot be managed by re-phasing, then another alternative will be needed.

You will remember that such an alternative was developed between you and Mr. Demuth in 1972, when it was first foreseen that the timing and amount of grants to ICRISAT might not meet the Institute's needs for a steady cash flow. The alternative was developed that an IDA line of credit to ICRISAT would be available to even out the flow, and, if used, be repaid out of later grants to ICRISAT. The conditions on which this line of credit would have been extended were that (a) the contributions to be expected from donors (including IDA) would, in fact, be sufficient for ICRISAT's needs, (b) the donors would be satisfied with ICRISAT's capital plans when they were further developed, and (c) that IDA's special assistance would be of short duration.

After consultation with you, the willingness of the management to consider an arrangement of this kind was expressed to the Consultative Group by Mr. Demuth in a statement made on November 2, 1972 (attached). The substance of this statement was recalled at the donors meeting of October 1973. In the April meeting of donors, when it was explained that the possibility of an IDA standby was no longer under consideration, donors expressed surprise and keen disappointment. In the statement which resulted from the April meeting, they urged the Bank "to pursue further its earlier initiatives to deal with the cash flow problem for the capital construction period of ICRISAT."

In the course of your discussions with Mr. Demuth, you noted on the margin of a memorandum from him that you wanted the idea of an accommodation to ICRISAT discussed with certain Executive Directors. This was done by the Consultative Group Secretariat toward the end of 1973. The German and British



Mr. Robert S. McNamara

- 6 -

Executive Directors (Dr. Janssen and Mr. Browning for Mr. Rawlinson) accepted the idea; the American Director (Mr. Sethness) accepted the idea personally, but said that he would wish to refer the matter to the NAC staff if and when it appeared likely that a proposal for an IDA accommodation to ICRISAT actually would be put to the Board.

The staff will not have until July the financial information needed for a recommendation on whether and how to proceed in this matter. I wanted to let you know in this memorandum, however, that the possibility exists that a recommendation will come to you that the Bank representative at the Consultative Group meeting at the end of July be authorized to make some such statement as Mr. Demuth made in 1972, and that concrete steps be taken thereafter to prepare a recommendation for an IDA standby for consideration by the Executive Directors.

Attachments

May 24, 1974

MIDDLE RANGE OF  
PROJECTED ICRISAT CONTRIBUTIONS (\$'000,000)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>	
Australia	--	--	--	--	--	
Canada	1.800	0.800	0.600	0.500	3.700	-11.5%
Germany	.850	.500	(.500)	(.500)	(2.350)	-7%
ICRISAT (Carryover)	.950	--	--	--	.950	-3%
IDA	--	(1.000)	(1.250)	(1.000)	(3.250)	-10%
IDRC	.275	.275	(.275)	(.275)	1.100	-4%
Japan	--	--	--	--	--	
Norway	.455	(.650)	(.900)	(.900)	(2.905)	-9%
Sweden	1.250	(1.300)	(1.310)	(1.400)	(5.260)	-16%
Switzerland	.150	.160	(.170)	(.180)	(.660)	-2%
United Kingdom	.400	.375	.375	(.385)	(1.535)	-5%
UNDP	.650	(1.000)	(1.000)	(.900)	(3.550)	-11%
United States	<u>1.000</u>	<u>(2.020)</u>	<u>(2.110)</u>	<u>(2.010)</u>	<u>(7.140)</u>	-22%
	7.780	(8.080)	(8.490)	(8.050)	(32.400)	

Figures in parentheses are Secretariat estimates. Figures without parentheses are based on donor statements.

April 30, 1974

Currency values as of  
January 2, 1974



REMARKS OF RICHARD H. DEMUTH  
November 2, 1972

"What I would like to hear this morning -- we heard some of it in connection with the 1973 discussions -- but what I would like to hear this morning from prospective donors of ICRISAT are statements of intention with respect to longer term support of the ICRISAT capital budget extending to 1975.

I am quite aware that any statements extending that far forward must be surrounded by more than the usual qualifications but nonetheless, I would take them to be serious declarations of intent which authorities on an executive level would do their utmost to see through to realization, provided that the authorities are satisfied with the detailed plans when they are produced, with the cost estimates, and are also given the necessary legislative authority and appropriations. If these declarations stretching out to 1976 seem sufficient to cover ICRISAT's estimated capital budget of \$13.4 million, then the management of the Bank Group is prepared to consider the feasibility of some kind of IDA underwriting arrangement which, if approved by our Executive Directors, would enable ICRISAT to enter into long-term contracts with assurance that it could meet the financial requirements as they come due.

IDA would consider doing this, however, only if satisfied on a basis of statements of the members of the Group that they intend to contribute the necessary funds to meet ICRISAT's capital costs so that any use of IDA's underwriting facility would be of short duration. The Bank Group itself would expect to be a contributor to ICRISAT, if its contribution was necessary to close a gap in basic funding and within the limits of the authority which may be approved by our Executive Directors from time to time, but to the extent that it simply advanced funds to cover the contingency of delays in payments of amounts intended to be provided by other donors, it would expect to be reimbursed.

So it is important if IDA is to consider doing this, and I carefully said that this is something under consideration by the management of the Bank Group and has not been presented to our Board of Directors but if IDA is to consider doing this, we must be satisfied that other donors of the Group have firm intentions subject to all the qualifications I have mentioned, to finance the capital cost of the ICRISAT facility."

93a.

Form No. 27  
(3-70)

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: APRIL 30, 1974

CLASS OF  
SERVICE: LT



COUNTRY: INDIA

TEXT:  
Cable No.:

WE NOW EXAMINING WORKING DRAWINGS AND SPECIFICATIONS. DO NOT FEEL IT WILL BE NECESSARY FOR LEACH TO COME HERE NOR ARE WE FINDING ANY BASIS ON WHICH WE COULD RECOMMEND POSTPONEMENT OF BID INVITATIONS. WILL ADVISE FURTHER WHEN EXAMINATION COMPLETED THIS WEEK. WITH RESPECT TO JAPAN SUGGESTED DATES YOUR VISIT NOW CLEARED IN TOKYO AND BENTLEY ADVISED ARRANGEMENTS YOUR VISIT SHOULD BE COORDINATED WITH WORLD BANK REPRESENTATIVE  
KOKUSAI  
ARITOSHI SOEJIMA/~~KOKUSAI~~ BUILDING MARUNOUCHI TOKYO.

GRAVES

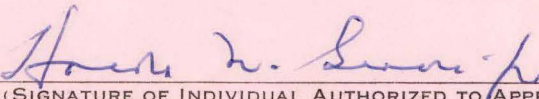
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AUTHORIZED BY:

NAME

DEPT.

SIGNATURE



(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

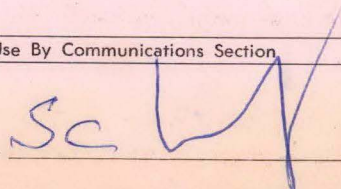
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**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:





OUTGOING WIRE

TO: CUMMINGS  
CRISAI  
SECUNDERABAD

DATE: APRIL 30, 1974  
CLASS OF SERVICE: LT

COUNTRY: INDIA

TEXT: Cable No.

WE NOW EXAMINING WORKING DRAWINGS AND SPECIFICATIONS. DO NOT FEEL IT WILL BE NECESSARY FOR LEACH TO COME HERE NOR ARE WE FINDING ANY BASIS ON WHICH WE COULD RECOMMEND POSTPONEMENT OF BID INVITATIONS. WILL ADVISE FURTHER WHEN EXAMINATION COMPLETED THIS WEEK. WITH RESPECT TO JAPAN SUGGESTED DATES YOUR VISIT NOW CLEARED IN TOKYO AND BENTLEY ADVISED ARRANGEMENTS YOUR VISIT SHOULD BE COORDINATED WITH WORLD BANK REPRESENTATIVE  
ARITOSHI SOLIMA  
KOKUBAI  
NEW YORK BUILDING MARUOUCHI TOKYO.

GRAVES

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April 29, 1974

INTEAFRAD

WASHINGTONDCUSA

GRAVES GRATEFUL YOUR CABLE CONCERNING REVIEW  
ICRISAT DOCUMENTS STOP ADVISE WHEN WE MAY EXPECT YOUR COMMENTS  
STOP AID REVIEW PROCEEDING EXPEDITIOUSLY STOP WE WISH  
TO PREPARE INVITATION TENDERS SOONEST POSSIBLE  
CUMMINGS CRISAT SECUNDERABAD

Distribution: Mr. Graves  
Agriculture & Rural Development  
Mr. Collier

~~BMC~~  
~~HG~~  
CJ  
G7

G3a

April 29, 1974

Dear Bill:

You may find the attached figures useful for the purposes of your current discussion with ICRISAT of the possibility of expanded support for the sorghum and millet programs. The figures are from the Government of India, and they show price rises in recent years. I have sent the same statistics to Ralph Cummings.

Sincerely,

Harold Graves

Enclosure

Mr. William T. Mashler  
Director  
Division for Global and Inter-regional Projects  
United Nations Development Programme  
866 United Nations Plaza (Room 3512)  
New York  
New York 10017

HGraves:apm

*HGW*



G.3a

April 26, 1974

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

Dear Ralph:

We are turning here to the matter of taking back to our management the idea of a standby arrangement whereby the World Bank Group (through its International Development Association) would advance funds, subject to repayment, to cover shortfalls experienced by ICRISAT during its construction period (1974-77).

When we put this idea to management again, we should be able to discuss it in terms of what the shortfalls may amount to in each year of the construction period, since this will indicate what amount IDA could expect to advance, or to have outstanding, at any one time. This would determine the estimate of the maximum amount to be advanced and the length of time which might be required to repay that advance after the end of the construction period. Some estimate of these amounts will be very important to the management, since it will give some indication of what claim will be made on IDA's resources, against all the other claims, also of high priority, that are being put forward at the same time.

At this time, I realize, estimates of this kind must be quite rough. As a starting point, I have scribbled out a tabulation of expenditures and availabilities: the expenditures add up to the 4-year total of \$33 million set in our meeting of April 4-5, and the availabilities are the same as those shown in the 4-year tabulation I sent you with my letter of April 19 (showing a total slightly lower than we actually expect). I have taken core figures at a full-program rate, which adds up to \$16 million for the four years in question. I have attributed the \$17 million balance to capital expenditures, and have distributed that \$17 million among the four years in the same proportions as your own March estimates. The table is in thousands of U. S. \$, and is as follows:

Dr. Cummings

- 2 -

April 26, 1974

	<u>Expenditures</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
1.	Core	2600	3750	4500	5100
2.	Capital	3520	7040	4100	2390
3.	Total	6120	10790	8600	7490
4.	<u>Available Funds</u>	7745	8080	8490	8050
5.	Annual Net	1625	-2710	- 110	560
6.	Cumulative Net	1625	1085	1195	635

It would be very helpful if you could revise this table according to the best calculations you yourself can make at this time. When you have done so, I would appreciate a telegram (since we want to move as rapidly as possible) giving your figures for lines 1 and 2.

Sincerely,

Harold Graves

*HG*

HGraves : apm

ICRISAT

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

67

April 25, 1974

TO: Members of the Consultative Group  
FROM: Executive Secretariat  
SUBJECT: Papers on Research Programs of ICRISAT and IRRI

Attached as of possible interest are papers describing the research programs of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and of the International Rice Research Institute (IRRI). One paper is from a talk given by Dr. Cummings, Director of ICRISAT, in London in February, and the other is from a talk given by Dr. Athwal, Associate Director of IRRI, in Singapore during the same month.

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Attachments



**EXPECTATIONS FOR FUTURE DEVELOPMENTS IN SORGHUM, MILLETS, AND LEGUMES\***

By

**Ralph W. Cummings**

**Director**

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

**\*Talk Given before the Science & Agribusiness Conference, London, England,  
February 19, 1974**

EXPECTATIONS FOR FUTURE DEVELOPMENTS IN SORGHUM,  
MILLETS, AND LEGUMES

The widening gap between irrigated and rainfed agriculture, and increasing population pressure on the land, the recurring cycle of frequent droughts, and insufficient suitable technology to ensure dependable harvests from year to year, have added new urgency to efforts to meet long range needs for increased levels and dependability of food production in the low rainfall, unirrigated semi-arid tropics of the world.

Approximately 400 million people inhabit such regions. Sorghums and millets, supplemented by limited amounts of pulses and other higher protein foods have formed the staple base of the diets of large numbers of these people. No significant breakthroughs in production technology for the semi-arid tropical agricultural areas comparable to those for wheat, rice and other cereals in the areas with assured water supplies have occurred. The threat of crop failure and famine is ever before these people. Their problems have been brought to world notice recently as a result of the recurring droughts and resultant disasters in the Sahel of Africa and in Northern Ethiopia.

The International Crops Research Institute for the Semi-Arid Tropics, which was chartered in July 1972, has among its major objectives: (1) serving as a world center to improve the genetic potential for grain yield and nutritional quality of sorghum, pearl millet, pigeon pea and chickpea, and (2) developing farming systems which will help to increase and stabilize agricultural production through better use of natural and human resources in these seasonally dry, semi-arid tropics. The Institute anticipates working in a number of ways, but recognizes the responsibility for the mounting of programs, both at its central location, and in cooperation with other institutions, agencies and organizations throughout the semi-arid tropics, which will have a rapid and major impact on the levels and dependability of food production in these hard pressed areas which have harsh climatic conditions, and where yield and availability of food supply are at best uncertain and difficult to maintain. The Institute recognizes that it is dealing with a sector of agriculture that is attended by frequent and serious risks, and that it must take these risks into account in developing a technology in which the inputs of the farmers into their production can have maximum expectation of yielding a dependable return. Unless a substantial impact is made upon this sector of the world through the Institute's efforts, and the efforts of those with whom it associates its endeavours, there will be reason for disappointment in its performance. The Institute recognizes that there is a great urgency in making an impact on this sector, as difficult as the task may be.

ICRISAT will direct its primary attention to that area of the semi-arid, rainfed tropics in which the combination of soils and climate, including temperature, rainfall and evapotranspiration, are such that sorghums and millets either have found a competitive place in the agricultural production systems and the food supply of the peoples concerned, or is such that these



crops can and should find an important place in their production system. No hard and fast physical classification of the climate defining the limits of ICRISAT's concern has been established, although that worked out by Troll comes as close as we are able to do at this time. This classification defines the semi-arid tropics as those areas in which rainfall exceeds potential evapotranspiration for only very limited portions of the year. It includes a broad belt across Africa from Senegal and Mauritania on the west to Ethiopia, Somalia and Tanzania on the east, and extending across the equator in the south eastern part of the African continent to embrace a large area in southern Africa, and the western part of Madagascar. The major portion of the Indian sub-continent, portions of north east Thailand, Malaysia and Burma, northern Australia, north east Brazil, an area around the Paraguay-Brazil-Argentine borders, and a substantial area in Mexico and central America are also included. Any work on the improvement of these crops for which the Institute has assumed major responsibility will have utility and repercussion in many other areas of the world as well, both in the developing and the developed world, and extending from the tropics into the temperate zones.

ICRISAT is rapidly assembling a broad base of genetic germ plasm of the crops concerned, beginning its evaluation, classification and description, putting the promising lines together in germ plasm complexes which will be made available to plant breeders throughout the region for making selections for crops adapted to their particular areas, and developing other studies on production technology of each of the crops and in the management of soils, water supplies, and crops in such a way that the dependability of production in these areas can hopefully be enhanced. I shall discuss the three groups of crops separately, but try to bring in some of the interrelationships.

According to the 1972 statistics reported by FAO in the Crop Production Year Book, sorghum occupies a total of approximately 40 million hectares of land in the world. This crop had its origin in Africa somewhere in the region around Ethiopia and the Sudan, and still occupies a major portion of the food crop acreage in these countries. Approximately 70% of the total world acreage is grown in Africa and India. Only about 6,640 hectares are reported in the developed nations of North America, Western Europe, Oceania, etc. although in these countries the technology of development has advanced much above that practised in the African and Asian areas, and the average yields are approximately five times the average for the African, Asian and Latin American zones. In other words, in the developed nations, the average yields are reported at approximately 3500 kilograms per hectare in contrast of an average of about 700 kilograms per hectare in the African and Asian area. Thus, the total grain production from sorghum is about equally divided between the developed and the developing nations, with about 23 million metric tons contributed by each. There is a major difference also in the types of plants which are produced in the two areas, and in the uses to which the grain is put. In the developed nations the emphasis has gone strongly toward development of hybrids of high degree of uniformity, early maturity, and short stature adaptable to mechanized culture and harvesting. The grain is used almost exclusively for livestock and poultry feed. In the developing nations of Africa and Asia in particular, the grain is still used largely directly for



human food or for processing in beverages (beer). The plant type in these areas tends to be quite tall, and the preferred grain type is light in colour with a hard or corneous endosperm. In some areas a red or brownish type may be preferred because of its apparent superior quality or preference for making of beer, and some presumed resistance to attack by the quelea bird which is a very serious pest in certain parts of Africa. The African varieties are more often sensitive to photoperiod and mature in the dry season following the rains. These plants have a wide grain/stover ratio and do not adapt well to intensive culture or high plant populations.

In the major sorghum growing belt across Africa from Ethiopia to the Senegal, the rainfall generally decreases as one moves from the south to the north. In the southern portion of this zone nearer the equator, the climax vegetation is forest, and root crops predominate in the agriculture and form the basic staple carbohydrate diet of the people. As one moves further north, however, the rainfall decreases in amount and in dependability and maize comes in as a very important crop. Still further north, maize and sorghum are mixed, the sorghum tending to predominate more and more as the rainfall becomes a bit less dependable and the periods of drought stress more common. As one moves further north still, and the rainfall decreases still more in amount and dependability, sorghums give way to millets or to shorter season varieties, and eventually as one approaches the desert, only the grasses which can be harvested by grazing animals form the base of the agriculture. As one looks at the improvement of sorghums for these different areas, the variation in climatic pattern must be constantly borne in mind.

The development of varieties which are somewhat shorter in stature, which are less sensitive to photoperiod, and which will mature within a given period of time following planting would seem to hold much promise to the area; but such varieties must have the capacity to resist damage from grain moulds during rainy periods if they are to find a place in the agriculture of the area. Likewise, the varieties must have the capacity to withstand drought periods and still mature a reasonably good crop, since the rainfall throughout the semi-arid tropics cannot be depended on with regularity within season and from season to another.

There are a variety of pests and diseases which must be overcome. Naturally in an area in which risk is high, it is necessary to think in terms of a technology which is more labour-intensive than capital intensive and one with a minimum of inputs which cost cash money. A great deal of emphasis will be placed on building into the genetic composition of the plants the ability to resist pests and diseases. Among the pests and diseases which we have to consider are the shootfly which attacks the plant and cuts off the growing point in the very early stages of growth, the stemborer which tunnels the stems at any point in the growth cycle, the grain midge which infects the plant at flowering time and whose larvae feed on the developing grain and prevent the seed from maturing. Diseases of sorghum include rust, downy mildew and the sugary disease. We would visualize that in due course we will have varieties of sorghum which will have a high degree of drought tolerance, will be shorter in height than the ones now growing, will be subject to



planting in denser populations, will be less photoperiod sensitive than the ones now grown, and will have a hard corneous endosperm with light coloured seed as preferred by the cultivators for their food products.

There are very exciting possibilities in improving the nutritional quality of sorghum. Recently certain lines coming out of collections made in Ethiopia have been shown by scientists at Purdue University to have an inherently high protein content (around 16 to 17% in the initial tests made), a relatively high percentage of lysine (around 3 1/4%) and a biological value approximating or exceeding that of Opaque-2 maize. These varieties which have been grown in limited amounts by cultivators in the area and are liked by them for eating in the green state. Fortunately, we have been able to obtain fairly large quantities of seed of these materials which are being multiplied and tested for adaptability. The characters for high protein and high lysine are being incorporated into crosses and into populations out of which selections will be made for future varieties. It is a little too early to say just how much impact this may have on the actual food value of the sorghums produced but this does seem to offer some very exciting possibilities for the future.

The nutritional quality is not simply a matter of total protein nor of lysine or amino acid balance. There are many other factors which must be taken into account including the ratio of lysine to leucine and the possible interference of tannins in the utilization of protein.

In view of sorghum's ability to tolerate periods of drought stress and still mature a reasonable harvest, a characteristic in which it is superior to maize, we visualize that it will have possibilities for extension into a number of areas where it is not now grown both because of its superior dependability in yield and for fitting into cropping systems to utilize residual moisture in the soil following other crops. It is entirely possible that this may find a quite substantial place in the rice growing areas across south and east Asia as a crop to be grown in the dry season utilizing the accumulated sub-soil moisture which otherwise is not now utilized in the single cropping system. Without more inputs in fertilizers and crop protection chemicals, it would be doubtful if we could expect the average yields of sorghum grain in the developing countries across Africa, where one has a labour-intensive but capital and power scarce economy, to equal those of the developed countries. But the fact that this five-fold differential exists does indicate something of the order of magnitude of its potential, and we are confident that the yields across the developing world can be increased very substantially. In the developed countries, under the best conditions where moisture is not a limiting factor and thus higher inputs can be put in, the yield of 3500 kilograms per hectare is less than half the maximum yields which have already been obtained.

Millets taken collectively represent a rather complex and highly diverse group of crops. There are altogether some 7 or 8 different species that are classed as millets, and in fact sorghum itself in some areas is classified as the great millet. The millet receiving major attention by



ICRISAT is the pearl millet or *Pennisetum typhoides*, known in parts of Africa as bulrush millet. This crop is more drought resistant than sorghum, tillers more heavily, grows more dependably in seasons of short duration rainfall, and does well on sandy and less fertile soils. This crop has within the germ plasm collections already in hand a high degree of variability, although it is more difficult to maintain the stability of the collections in view of the extent of natural cross pollination. Male sterile lines have been identified and are in course of further development which make possible a program of hybridization and population improvement on a rapid scale. There are characters in this crop for a wide variety of grain colour from white or yellow to grey or even purplish colour. Many of the varieties have bare seeds while others have long awns which partially protect the grain from bird damage. There are wide variations in height, and in the potential grain straw ratio. Millet tillers more profusely than sorghum and can be ratooned to produce a sequence of fodder crops or of fodder crops followed by a grain crop. In this respect it is superior to sorghum. Thus when the rainfall is of a little longer duration, one can utilize the full rainfall season by a combination of one or more fodder crops followed by a grain crop from the same planting. The utilization of dwarfing genes to pull down the plant height has the potential of making it possible to pack larger numbers of plants on to a given area of soil and to increase the ratio of grain to stover and thus improve the efficiency of conversion of photosynthetic energy into immediately usable food products. It is susceptible to some of the same pests as sorghum although it is not as severely attacked by the shootfly, the stemborer, or the midge. It is a favourite of many birds, however, and this is one problem that has to be reckoned with. In India in recent years, attacks of downy mildew and ergot have been serious. Thus concerted attention toward the development of varieties which are resistant to these diseases under a range of conditions will be necessary. The general level of protein and its quality are reasonably good although it is, like sorghum, somewhat too low in lysine for the best balance in nutritional value. It is a rapidly growing plant, establishes itself quickly and well, and puts its roots down deeply and has a high rate of productivity per unit of time. Its grain production potential seems to be lower than sorghum but its ability to withstand more rigorous environmental conditions gives it a very important place, overlapping with the sorghum producing zones and extending into areas that are too dry or where rainfall dependability is not good enough for sorghum to be a good and dependable crop. Yields of 4 to 5 tons per acre, however, should be readily obtainable under good conditions and some harvest can be expected under quite unfavourable circumstances.

The food legumes or pulses represent a very diverse group in terms of their botanical classification as well as their areas of adaptation and present cultivation. The accompanying table gives world statistics on the production of ten of these, namely, chickpea (*cicer arietenum*), the pigeon pea (*cajanus cajan*), the cowpea (*vigna sinensis*), the dry beans (*phaseolus vulgaris*), the broad beans (*vicia faba*), the dry peas (*pisum sativum*), lintels (*lens esculenta*), and other miscellaneous pulses and, in addition, soybeans and groundnuts. With recent breakthroughs to higher levels of production of some of the major cereal crops, without a corresponding advance with the legumes, the area in some of the food legumes has been decreasing, and thus



the proportion of protein available for the diets of people in the developing nations has been suffering. There is a critical need for rapid progress in the technology of production and in the levels of production obtainable on an economical basis with these crops so that they can again find their competitive place in the production systems and can be produced economically by farmers in such a way as to provide the needed high protein sources to balance out the dietary needs of the populations.

The chickpea and the pigeon pea are among those which have come up for major attention in ICRISAT. The work with these crops is just beginning in our Institute and it is a little too early for us to project just what the actual potentials are. However, there has been quite good work done in other institutions previously, and the range of variability in our germ plasm collections and in the observations we have made to date on cultural practices, leads us to be hopeful that some quite substantial progress can be made in these crops.

The chickpea is normally grown in the dry season and matures on residual moisture left over in the soil after a rainy season. It is a relatively short statured crop, and most of the tests which have been reported have not shown a great degree of responsiveness in grain yield to irrigation or fertilization. There are important differences in production under different soil conditions, however, and there is every reason to believe that the problems of increased production can be elucidated with systematic study. Among the important disease problems are the virus disease and the wilt, the exact nature which are not yet fully understood but which must receive early attention. There are large variations in plant type with respect to the degree of erectness of the plant which in turn influences the density of plant populations which can be put on the land. There are wide differences in the amount of branching, the number of pods per node on the secondary branches, the size of the pods, the size of the seed, and the colour of the seed. A very extensive program of crossing is underway with the chickpea in the hope that we will be able to combine into a single plant the characters which will lead to substantial increase in production levels, and at the same time maintain a high degree of dependability of production and nutritional qualities.

With the pigeon pea, there are very substantial variations in the length of time from planting to maturity. The pigeon pea normally grows rather slowly in the early stages but, once established, puts up a woody and hardy plant which is able to utilize residual moisture to quite some depth in the soil. By developing plants which are faster growing, earlier maturing, which have a determinate plant habit, produce larger pods with a more synchronous time of maturity, and larger seed, it is hoped that the productivity per unit of soil, water, land, and time can be substantially increased. Pod boring insects constitute one of the big problems which must be overcome if dependable production is attained.

India ranks as the largest producer of both chickpeas and pigeon peas. Chickpeas are also grown quite extensively across the Middle East and the Mediterranean Area and in parts of Latin America, including Mexico and the higher elevations in the Andes. It is also grown quite extensively in Ethiopia.



Pigeon peas are grown commercially most extensively in India. Elsewhere it is apparent that the production statistics are quite inadequate. It is normally grown in these other countries as a hedge crop around housing areas or as a mixed crop interplanted with cereals, the cereals being harvested first and the pigeon pea left to mature later. It has a wide adaptation, and presumably will be able to find a larger place in the future.

Across Africa, the cowpea seems to be the preferred grain legume and has a much bigger place than does the pigeon pea. This is true also in certain parts of Latin America. Other legumes which are important and which are being given attention elsewhere, include the dry beans, which are receiving major attention in CIAT, the broad bean which is being given consideration in the ALAD center, and the mung bean which is one of the major crops under improvement by the Asian Vegetable Research & Development Center.

You will note from the statistics that the major production of soybeans in the world is in the developed countries, and in the centrally planned nations, 48 million out of 53 million hectares being in these groups of countries. It is not yet grown extensively in the developing nations, although there is increasing evidence that it can be extended into these areas. Time does not permit a full analysis of the potential of this crop, although the work undertaken by the University of Illinois under support from USAID hopefully may help to identify the potentials which it may have in the developing semi-arid, tropical world.

The accompanying table gives the world statistics on groundnut production. It is to be noted here that approximately 80% of the production of groundnuts occurs in the developing world and in the centrally controlled nations, with only about 2.1 million hectares being grown in the developed nations. This crop fits closely into the farming systems of the semi-arid tropics along with the sorghums and millets. It is an important cash crop with a substantial portion of the crop being sold off the farm for oil production and for confections. However, in many of the developing nations it is also utilized as a food crop, forming the base for the sauces and other mixtures which add to the flavour and nutritive value of the cereal crop preparations served in the village homes.

ICRISAT is currently developing a working paper on this crop for eventual consideration to determine whether or not it may have an important place in the future program of the Institute. It will be included in the farming systems with which ICRISAT is concerned, even if not as a crop for which this Institute undertakes intensive genetic and cultural improvement studies.

While the above discussion has concentrated specifically on the sorghum, millets and legumes and their genetic improvement along with the necessary auxiliary studies on their cultural requirements and their physiology and plant protection, it would be incomplete if we did not mention the fact that there is a great potential, even with the varieties now available, for improving the systems of soil, water and crop management so as

to get a greater return and a greater dependability of production. It has to be kept in mind that much of the area which we need to serve and which needs to come forward in its production technology, is characterized by small farms with limited power resources and very limited capital, and the technology must be applied largely by hand operations or with simple tools. This will continue to pose important restrictions and make major differences between the work designed to serve the needs of these developing economies from that which has been developed to serve the needs of the more affluent and industrialized regions of the world.

We at ICRISAT have been given what I consider as an extremely difficult task but the attempt to analyse and to direct best efforts toward the solution of these very baffling problems is a most challenging and stimulating experience, and we are dedicated toward doing the very best we can to measure up and justify the confidence and responsibility which have been placed with us.

TABLE I  
 PRODUCTION OF SORGHUM  
 1972

	<u>Area</u>	<u>Yield</u>	<u>Production</u>
<u>Developed Nations</u>			
(North America, Western Europe, Oceania, & Misc.)	6,640	3,493	23,193
<u>Developing Nations</u>			
Africa	10,292	733	7,543
Latin America	2,854	1,735	4,953
Near East	3,453	945	3,264
Far East	16,574	460	7,628
Other Developing nations	1	1,926	2
<u>Centrally Planned Nations</u>			
(USSR & China)	114	1,099	126
World	39,929	1,170	46,709
Average yield	-	Developed Nations	- 3,493
	-	Developing Nations	- 705
Total Production	-	Developed Nations	- 23,193
	-	All Others	- 23,516



TABLE II  
 PRODUCTION OF MILLETS\*  
 1972

	Area ( <sup>'</sup> 000 ha)	Yield (Kg/ha)	Production ( <sup>'</sup> 000 metric tons)
Developed Nations (Western Europe, Oceania & Misc.)	75	1,047	78
Developing Nations			
Africa	13,846	612	8,467
Latin America	405	815	330
Near East	985	1,434	1,412
Far East (largely India)	17,598	464	8,164
	-----	-----	-----
	32,834	560	18,373
	-----	-----	-----
Centrally Planned Nations			
Asia (largely China)	29,454	759	22,355
USSR, Eueope	2,726	789	2,150
	-----	-----	-----
	32,180	761	24,505
	-----	-----	-----
World	65,089	660	42,956

\*Millets comprise several distinct plant species including the following:

Pearl Millet	( <i>Pennisetum typhoides</i> )
Finger Millet	( <i>Eleusine coracana</i> )
Italian Millet	( <i>Setaria italica</i> )
Little Millet	( <i>Panicum miliare</i> )
Kodo Millet	( <i>Paspalum scrobiculatum</i> )
Common Millet or Proso	( <i>Panicum miliaceum</i> )
Barnyard Millet	( <i>Echinochloa frumentacea</i> )

TABLE III

PRODUCTION OF LEGUMES (Pulses)  
(in thousand metric tons)  
1972

	Chickpeas	Pigeon Peas	Cowpeas	Dry Beans	Broad Beans Dry	Peas Dry	Lentils	Pulses Misc.	Soybeans	Groundnuts
Developed Nations	140	-	41	1,778	819	474	87	161	35,398	2,100
Developing Nations										
Africa	346	71	1,190	1,124	402	379	142	886	70	4,371
Latin America	197	41	5	4,014	176	107	24	47	4,155	1,358
Near East	259	-	11	199	452	9	348	182	20	501
Far East	5,774	1,608	17	2,018	-	709	497	1,733	832	5,866
Centrally Planned Nations	2	-	1	1,767	3,477	8,540	85	560	12,547	2,691
World	6,718	1,720	1,265	10,900	5,326	10,218	1,183	3,569	53,022	16,887

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FROM: TOKYO  
April 24, 1974

Distribution

Mr. Graves  
Agriculture & Rural Dev.

1974 APR 24 AM 8:25

COMMUNICATIONS  
SECTION

200 H. N. GRAVES

REURLET 76 TO SOEJIMA

AS HE IS ATTENDING ADB MEETING EYE SPOKE TO MIKANAGI. HE HAS RECEIVED NO OFFICIAL COMMUNICATION ON PROPOSED VISIT TO TOKYO JUNE 5 AND 6 BY CUMMINGS AND BENTLY. AT PRESENT HE EXPECTS TO BE IN TOKYO ON THESE DATES HOWEVER WOULD APPRECIATE YOUR CONTACTING THEM AND SUGGEST OFFICIAL NOTIFICATION SHOULD BE SENT. IF THEY REQUIRE ADDITIONAL APPOINTMENT WE WOULD BE PLEASED TO ARRANGE. REGARDS

STEWART



G.3a

April 24, 1974

Dr. Dieter Krause  
Africa Desk II  
BROT FÜR DIE WELT  
7 Stuttgart 1  
Stafflenbergstrasse 76  
Federal Republic of Germany

Dear Dieter:

It was a pleasure to hear from you!

I hope that by now you have received two documents that were sent to you concerning the International Crops Research Institute for the Semi-Arid Tropics: a pamphlet describing the Institute, and a recent talk by its Director about its intended research program. As the talk brings out, ICRISAT's research is expected to benefit small-farm production on the Indian sub-continent, in western Africa (including the Sahel) and eastern South America, together with certain other more limited regions, such as the eastern plateau of Thailand.

ICRISAT is now about to begin the construction of its physical facilities in Hyderabad, Andhra Pradesh, India. Donors have agreed to put up \$33 million for ICRISAT over the four years 1974-1977, of which about \$17 million is available for buildings and equipment. Due to the rapid rise of construction costs in India (25 per cent in 1973), this is not as large a sum of money as it seems to be, and it still falls short of being enough to finance essential research facilities at ICRISAT.

Is there a chance that Bread for the World would be interested in joining other donors who are contributing to the cost of ICRISAT's physical facilities? A contribution of \$500,000, for instance, would pay the cost of two of ICRISAT's projected laboratory buildings. Other donors, incidentally, include Canada, Germany, Great Britain, Sweden, Switzerland, the United States and the International Development Research Center (a quasi-private organization based in Canada).

If there is a chance that Bread for the World could consider a contribution, I would be very anxious to come to Stuttgart to

Dr. Dieter Krause

- 2 -

April 24, 1974

discuss the possibility with you and your colleagues in the course of a general visit I intend to make to Germany in May or June. Dr. Klaus Lampe of the Bundestelle für Entwicklungshilfe, in Frankfurt, is a member of the Board of Trustees of ICRISAT, and also would be glad to give information about ICRISAT.

Please let me know your reaction to the idea of a possible contribution to ICRISAT.

Sincerely,

Harold Graves  
Executive Secretary

cc: Dr. Klaus Lampe

*HG*

HGraves:apm



93a

Form No. 27  
(3-70)

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

**OUTGOING WIRE**

TO: **CUMMINGS  
CRISAT  
SECUNDERABAD**

DATE: **APRIL 24, 1974**

CLASS OF  
SERVICE: **LT** *RCA*

COUNTRY: **INDIA**

TEXT:  
Cable No.: **YOUR TELEX RECEIVED ON WASHINGTON REVIEW ICRISAT DOCUMENTS. AM  
PRESSING FOR FAVORABLE REPLY HERE AND WILL INFORM.**

**GRAVES**

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME **Harold N. Graves, Jr.**

DEPT. **Agriculture & Rural Development**

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: **HGraves : apm**

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

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DEPT: AGRICULTURE & RURAL DEVELOPMENT

NAME: HAZOJD M. STAVES, JR.

AUTHORIZED BY:

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STAVES

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OF

DATE: APRIL 24, 1974

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DATE: APRIL 24, 1974

ORIGINAL MESSAGE

ASSOCIATION INTERNATIONAL DEVELOPMENT

REGISTRATION AND DELEGATION INTERNATIONAL BANK FOR

ASSOCIATION INTERNATIONAL FINANCE

*[Handwritten mark]*





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

G7

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

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

April 23, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

✓ Seen by HG

I wish to thank you very much for your letter of April 15, 1974 with further reference to sources of funds for the ICRISAT project. I appreciate very much what you are doing in our behalf to help assure adequate availability of funds for the project.

The possibility of approaching the Kresge Foundation is an interesting possibility which I hope we can explore further. I will wait until I hear from you again, however, before taking any steps from this end.

With highest regards,

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)



Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

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

April 23, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

*Handwritten initials: V. S. M. H. A.*

Dear Harold,

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The possibility of approaching the Kresge Foundation is an interesting possibility which I hope we can explore further. I will wait until I hear from you again, however, before taking any steps from this end.

With highest regards,

Sincerely yours

*Handwritten signature: Ralph W. Cummings*  
Ralph W. Cummings  
Director

RWC:jg

52787-2-11000

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APR 22 10 05 PM 1974

COMMUNICATIONS  
SECTION

~~Bill~~  
~~HG~~  
G  
G7

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SECUNDERABAD 113/110 22 1830 PAGE 1/50

Distribution:

Mr. Graves  
Agric. & Rural Dev.  
Mr. Kraske

APRIL 22, 1974

INTBAFRAD

WASHINGTONDCUSA

GRAVES FURTHER MYCAB AND LETTER APRIL SEVENTEEN REQUEST YOU  
CONSIDER IMMEDIATE REVIEW IN WASHINGTON ICRISAT DOCUMENTS CONCERNING  
PROPOSED CONTRACT CONDITIONS SPECIFICATIONS AND CONSTRUCTION  
STANDARDS AND TRANSMISSION SUGGESTIONS FOR INCORPORATION PRIOR  
TO TENDERING HOPEFULLY EARLY MAY STOP BOARD WILL NOT HAVE TENDERS  
FOR REVIEW AT MAY MEETING AND AM

~~BSSG7 PAGE 2/50~~

UNCERTAIN AS TO VALUE BANK ARCHITECT VISIT THAT TIME STOP IF  
WE CAN INVITE TENDERS PRIOR MAY FIFTEEN THESE COULD BE RECEIVED  
AND AVAILABLE REVIEW WASHINGTON PRIOR OR IMMEDIATELY AFTER  
INTERNATIONAL CENTERS WEEKS STOP AID ARCHITECT/ENGINEER NOW  
IN HYDERABAD REVIEWING DOCUMENTS STOP AID WASHINGTON CONCURRENTLY  
STUDYING ELECTRICAL AND MECHANICAL FEATURES

~~BSSG7 PAGE 3/10~~

AND WILL COORDINATE AGENCY CONCLUSIONS  
THERE STOP

CUMMINGS CRISAT SECUNDERABAD



G.3a

April 22, 1974

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

Dear Ralph:

The purpose of this note is to offer you some comment on the draft program and budget paper you brought to Washington with you early this month. After a careful reading, it still seems to be an excellent presentation.

Bill Lewis and I have very few comments. For the most part, they are written in ink on the pages which I am returning with this letter. Purely from a typographical point of view, I think it would be helpful if you carried through a little further on the style of headings begun early in your text. Headings are suggested as shown on pages 1, 4, 5, 8, 9, 11 and 12.

On page 4, some additional narrative text is needed with the tabulation given on the 1975 budget. Because of ICRISAT's present stage of development, the narrative cannot be on the same formula as that of existing centers. I have drafted a new page 4 and 4a to illustrate one way in which the narrative might be handled.

On page 5, in your text on the sorghum and millet program, you might want to add some language indicating that discussions have begun looking toward the extension of this work to countries of the Sahelian zone of western Africa. This would help provide a hook on which to hang discussions with potential additional donors.

On page 12, a new section of narrative text is needed to describe the main features of the capital plan, the present state of capital planning, and anything you want to include about the length of time necessary to complete construction. This section does not need to be very detailed; it could be as elementary as some of the information given in paragraphs 9, 10 and 11 of the Secretariat paper we discussed in Washington at our meeting of April 4-5.

Dr. Ralph W. Cummings

- 2 -

April 22, 1974

We agree that no Table II is necessary for ICRISAT at this stage in its development. To avoid the question, "Where is Table II?" perhaps what is now numbered Table III could become Table II, and so on.

With respect to the present Table III, we think that the form could be somewhat simplified. A memorandum from Bill Lewis on this subject is included in the pages being returned with this letter. It is the structure of headings, sub-headings and line items to which we want to call your attention, not the numbers as such. And you probably will want to restore the detail about donors, which, for the purposes of Bill's illustrative arrangement, has been reduced to single lines under his item 1a and 1b.

Sincerely yours,

Harold Graves

Enclosure

*HG*

HGraves:apm

cc: Mr. Lewis



April 19, 1974

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

Dear Ralph:

I talked with Sterling Wortman this morning about the matter of a possible contribution to ICRISAT from the Kresge Foundation. He says that probably the best way to approach the Foundation is to make a specific proposal directly to Mr. William Baldwin, the President of the Foundation. (For your possible future reference: Baldwin's address is The Kresge Foundation, 1500 N. Woodward Avenue, Birmingham, Michigan.)

As you probably know, the Kresge Foundation makes grants for construction only. Sterling agrees that a proposal to finance the ICRISAT library might be attractive. When you are ready (presumably after the construction bids are in), you could make your presentation; Sterling says that it ought to include not only cost estimates, but any architectural plans and sketches of the building that might be available.

Sterling would be glad to be of help. If you wanted to visit Kresge around the date of International Centers Week, please write him and he will write to Baldwin. If you want to handle the matter by correspondence, Sterling would be glad to have you mention to Mr. Baldwin that he (Sterling) would be happy to give an opinion on the merit of the project.

Two other matters --

With this letter, I am sending a tabulation of how the funding of ICRISAT looks to me over the period 1974-77,

Dr. Ralph W. Cummings

- 2 -

April 19, 1974

showing the figures I have put down for individual donors. These are the figures corresponding to the \$33 million figure that emerged from our meeting of April 4-5. Since donors don't like to have such figures bandied about, I would appreciate your keeping them confidential.

The UNDP figures, incidentally, reflect an increase of \$500,000 over UNDP's original intent. The distribution of UNDP disbursements from year to year is strictly notional, and no doubt may be changed between you and Bill Mashler.

Finally, I undertook to get figures that might help give a basis on which UNDP and you might justify the contemplated increase of UNDP's grant. There is no figure for contingencies on running costs, as there is for the costs of civil works and equipment. Recent price trends, however, are shown on a page attached to this letter.

Sincerely,

Harold Graves

DECLASSIFIED

AUG 27 2021

WBG ARCHIVES

Attachments



HGraves:apm



G3a  
April 18/72

FINAL REPORT

INITIAL STAGE OF THE PROPOSAL FOR THE ESTABLISHMENT  
OF THE INTERNATIONAL CROPS RESEARCH INSTITUTE FOR  
THE SEMI-ARID TROPICS (ICRISAT)

This report supplements the progress report on ICRISAT presented to the ICRISAT Sub-Committee on April 18, 1972, and recorded in its minutes, a copy of which is appended hereto (appendix I).

The initial stage of the Proposal, as set forth in the memorandum of agreement between the IBRD and the Initial Donors (appendix II) and in the ICRISAT Special account agreement with the Ford Foundation (appendix III) is described as follows:

1. All those activities necessary to establish ICRISAT as an independent entity in a position (when appropriately financed and fully staffed) to carry forward the remainder of the Proposal, plus
2. Such activities as may be feasible and helpful in order to put ICRISAT in a position to proceed with its research mission, which may include but are not necessarily limited to the following:
  - a) Making of appropriate arrangements with the host country for the establishment and operation of ICRISAT;



- b) The preparation, adoption, and registration of a charter, or constitution, with appropriate by-laws, or other documents necessary to assure the continued operation of ICRISAT as an independent legal entity with the authorities required to achieve the objectives set forth in the Proposal;
- c) The constitution of the initial governing board or board of trustees;
- d) The selection and acquisition of a suitable site;
- e) The recruitment and employment of the Director, initial staff, and temporary consultants;
- f) The selection and purchase of necessary initial equipment and supplies;
- g) The initiation of planning for the research program;
- h) Some initial development of experimental fields and beginning experimental plantings;
- i) Initiating site and facility planning and site development, including engaging architectural services and making available temporary service buildings if necessary.

When the Foundation determines that it has carried the Initial Stage to the point at which the Institute is in a position to carry forward the remainder of the Proposal

it shall so notify the Bank and the Subcommittee and shall submit a final report of its activities under this Memorandum and the Agreement, at which time its obligations under this Memorandum and Agreement shall terminate.

#### LEGAL STATUS

The Institute was formally constituted as a proper legal international organisation on July 5, 1972, its constitution being signed officially by Mr. R.H. Demuth, representing the International Bank for Reconstruction and Development and Dr. D.L. Umali, representing the Food and Agricultural Organization of the United Nations, with assent of the Government of India, conveyed in a letter from Dr. M.S. Swaminathan. Privileges and immunities in India were assured under the United Nations (Privileges and Immunities) Act of 1947 by publication on October 28, 1972 in the official gazette of the Government of India, thereby giving these assurances the force and effect of law. The Constitution, having the agreement with the Government of India made a part thereof, is attached herewith as appendix-IV and a copy of the notification in the official gazette is attached as appendix-V.

### GOVERNING BOARD

The first meeting of the Governing Board was held on July 4 and 5, 1972 and the second meeting on January 5-7, 1973, both in Hyderabad, India. Two meetings of the Executive Committee of the Board have been held, one in Washington, D.C., during International Centers Week July 31 - August 4, 1972 and one in Hyderabad on August 29-30, 1972. The composition of the Governing Board is as follows:

<u>Classification</u>	<u>Name</u>	<u>Designation</u>	<u>Date of Appointment</u>	<u>Expiration of term</u>	<u>Re-appointed</u>
Nominated by Government of India (Designated by position)	Mr. T. Swaminathan	Cabinet Secretary	April, 1972	Nov. 1, 72	
	Mr. B.D. Pande	Cabinet Secretary	Nov. 2, 1972		
	Mr. V.K. Rao	Chief Secretary, Andhra Pradesh	April, 1972		
	Dr. M.S. Swaminathan	Director General Indian Council of Agricultural Research.	April, 1972		



Nominated by  
Consultative Group  
on International  
Agricultural  
Research

Dr. D. Wynne Thorne Vice-President April, 1972 April, 1973\*  
for Research,  
Utah State  
University,  
Logan, Utah (USA)

Dr. Klaus Lampe Director, Department April, 1972 April, 1974  
of Agriculture,  
Agency for Economic  
Cooperation, Federal  
Republic of Germany,  
Frankfurt.

Mr. A. R. Melville Chief Natural April, 1972 April, 1975  
Resources Advisor  
Overseas Develop-  
ment Administration  
London, England.

Members at  
Large

Prof. C.F. Bentley Professor of April, 1972 April, 1973 1973-76  
Soil Science  
University of  
Alberta,  
Edmonton, Canada.

Dr. D.L. Umali Assistant Director Apr. 72 Apr. 73 1973-76  
General, FAO Regional  
Office for Asia &  
Far East, Bangkok,  
Thailand.

Mr. Francis Bour Director General April, 1972 April, 1974  
Institute de recherches  
agronomiques tropicales  
et des cultures  
vivrieres (IRAT)  
Paris, France.

Mr. Rubens Vaz da Costa	President, National Housing Bank, Rio de Janeiro Brazil	April, 1972	April, 1974
Dr. Melak H. Mengosha	Dean, College of Agriculture, Alemaya, Ethiopia	April, 1972	April, 1975
Dr. Ewert Aberg	Professor & Head of Department of Plant Husbandry Agricultural College of Sweden, Uppsala, Sweden	Nov. 1972	April, 1975
Ex-Officio Dr. Ralph W. Cummings	Director, ICRISAT Hyderabad, India	Sept. 1972	

Dr. C.F. Bentley was elected as the First Chairman, and Dr. M.S. Swaminathan as Vice-Chairman. Both were re-elected for a second one-year term at the meeting January 5-7, 1973.

\*Recommended by Board to consultative Group for re-appointment

EXECUTIVE COMMITTEE

The Executive Committee, empowered to act for the Board in the interim between full meetings on all matters delegated to it by the Board, consists of the following:

C.F. Bentley, Chairman of Board

M.S. Swaminathan, Vice Chairman

R.W. Cummings, Director

A.R. Melville

D.L. Umali.

DIRECTION

Dr. R.W. Cummings, of the Ford Foundation, served as Project Development Officer until June 30, 1972 and Dr. C.F. Bentley served in this capacity from July 1 through August 31, 1972.

In early September, Dr. R.W. Cummings was selected by the Board as the first Director of the Institute. He served in this capacity on a part time basis until November 15, at which time he was relieved of responsibility as Director of the International Rice Research Institute and assumed full time duty as the ICRISAT Director.



FINANCIAL - ARRANGEMENTS FOR HANDLING FUNDS

Up to the present time, Institute funds have been held by the IBRD in a special fund, from which the Ford Foundation has been reimbursed periodically on the basis of its billings for expenditures incurred in implementing the Initial Stage of the Proposal for establishing the Institute.

The Institute has now employed an Accounts Officer, has made arrangements for establishing bank accounts with the National and Grindlays Bank in Hyderabad and with the First National City Bank of New York. Any two of four or more members of the international professional staff of the Institute designated by the Director with the approval of the Chairman of the Governing Board are recognized as signers authorized to draw funds from these accounts. Arrangements are being made for bonding the drawing officers.

A.F. Ferguson & Co., Chartered Accountants, have been appointed as External auditors.

FINANCIAL OUTLOOK

Members of the Consultative Group, in the meeting in Washington November 1 and 2, 1973, indicated strong support for the Institute. These indications would seem to assure sufficient funds to meet the operating capital

needs of the Institute for 1973 and 1974. While firm pledges could not be made over a longer period, the prospects of funds to cover the full capital costs and the projected operating requirements appear quite optimistic.

#### INITIAL STAFF APPOINTMENTS

The following persons have been appointed to the senior international professional staff:

R.W. Cummings, Director.

J.S. Kanwar, Associate Director

A.D. Leach, Engineer - Physical Plant Development

C.R. Pomeroy, Engineer - Experiment Station  
Development & Operation

B.A. Krantz, Agronomist

Jacob Kampen, Soil and Water Management Specialist.

Mr. W.D. Ware Austin has spent approximately two months with this Institute as a consultant on land use and conservation planning.

Approximately fifteen local persons have been employed as professional support staff, in addition to various service support employees such as security officers, fieldmen, including field supervisors, drivers, field labour, etc.

The Institute has entered into an agreement with the Institute of International Education, New York, for

handling the salary payments, initial overseas shipments, and insurance and retirement benefits of senior international professional staff members.

#### SITE ACQUISITION AND DEVELOPMENT

A tract approximately 1360 hectares of excellent land, with a frontage on the main highway leading towards Bombay and at a distance of 26.5 kilometers from the Begumpet airport in Hyderabad was turned over to the Ford Foundation, acting on behalf of the Consultative Group on Agricultural Research, as the site for establishment of the Institute. The formal lease to the Institute, now formally constituted, is under preparation.

Two villages on the site, Kachireddipalli and Manmole, are still occupied but steps have been taken towards acquisition of this village property and movement of the occupants to an alternate site outside the boundaries of the ICRISAT property. Some more time will be required to complete this movement.

The entire area has been fenced and a peripheral road built, a drain has been opened through the largest tank on the property to permit this area to dry out sufficiently for the rehabilitation work to be undertaken. Two areas within the site boundary have been fenced for protecting the experimental plots established during the Initial stage. A third area has been enclosed by a security fence for the



field operational headquarters and two temporary buildings have been erected within this third area for temporary field offices, a conference room, and a shop. Fuel tanks have also been installed. In addition, two small buildings in the adjacent Patancheru village have been leased to supplement the facilities for field operation in the initial period.

The Survey of India has been engaged to prepare an official upto date boundary and topographic map of the site as a permanent official record and to serve as a base map for future planning.

A building very near the Begumpet airport has been leased as a City office. Telephone communication has now been established between this city office and the field site.

#### EQUIPMENT PURCHASE

A limited amount of the most urgently needed initial equipment and supplies were purchased to the extent funds permitted. Local sources have been used to the extent suitable items could be obtained locally.

The Ford Foundation agreed to serve as purchasing agent for items purchased abroad during this Initial Stage and has agreed to continue this service for some time into the future.

Now that additional funds have been provided, the acquisition of both field and laboratory equipment and vehicles is being accelerated.

#### ARCHITECTURAL PLANNING

The firm Vasthu Shilpa headed by Mr. B.V. Doshi of Ahmedabad in collaboration with Joseph Allen Stein & Associates of New Delhi were selected as the Institute architects and a contract was signed with them on August 30, 1972. The architects and the Physical Plant Engineer visited the International Rice Research Institute, along with the Director Designate and also the Asian Vegetable Research and Development Center. The Director and the Engineer for Physical Plant Development have had frequent conferences with them, including, in the early stages, setting forth the basic architectural program contemplated.

A conceptual plan was presented and discussed at the Governing Board meeting January 5-7, 1973. The schedule calls for a meeting April 16 and 17, 1973 with an architectural planning sub-committee of the Board for review and decisions on the Schematic Designs. Following this, they anticipate needing approximately eight months to complete the detailed plans and specifications against which to invite tenders.

PROGRAM DEVELOPMENT AND RESEARCH PROGRESS

Although the Institute had very limited staff and facilities, it was possible to inaugurate a limited field agronomic research during the first crop season, almost immediately after getting possession of the land. The first season's work, for which Dr. B.A. Krantz, Agronomist and Mr. S.K. Sharma, field supervisor, were largely responsible, has given a great deal of experience which will be extremely helpful as a background for charting the next phases. Dr. Kampen, who joined the research staff more recently, has been collaborating with Dr. Krantz, in formulating plans for the studies on farming systems (outlined below) which will be initiated in 1973.

We anticipate the organization of a series of program planning workshops on the different phases of the Institute's program as soon as feasible. This will be undertaken subsequent to the recruitment of a few more senior professional leaders to the staff of the Institute. The objectives of this initial research program were as follows:

1. To conduct a wide spectrum of agronomic field investigations to get useful leads for future farming systems research program. To accomplish this goal, a broad spectrum of agronomic experiments were conducted involving fertilization, dates of planting, variety comparison, inoculation studies and inter-cropping studies of the best



available varieties of sorghum, pearl millets, pigeon peas and soyabeans during the kharif season. During the rabi season, similar studies were conducted on sorghum, pearl millet, pigeon peas, chick peas, garden peas, sunflower, safflower and castor beans.

2. To observe and measure yields, growth responses, insect infestations and rooting patterns of the various crops.
3. To observe soil erosion problems and responses of black and red soils to tillage and management techniques.

#### General

Before starting any field operations at ICRISAT, pictures were taken of key places of the Institute's property to record the initial situation. Pictures were also taken of key events such as the following:

- a. Handing over of the title of the property from Mr. M.A. Baig, representing A.P. Government, to Drs. Krishnamoorthy, representing ICAR, to A.A. Johnson, Ford Foundation, representing ICRISAT.
- b. The starting of the brush clearing on May 2.
- c. Starting of the planting operation on June 24.

Series of pictures were also taken on various farm development operations, such as:

- a. Boundary post installations;
- b. Boundary road construction;
- c. Boundary fence installation;
- d. Culverts installation in boundary road;
- e. Construction of temporary farm service department building and land development operations.
- f. Low-water bridge construction at the two railroad underpasses.

A series of pictures of experimental plots depicting nutrient responses, varietal responses and inter-cropping responses and various cultural operations, such as thinning, insect spraying, harvesting and threshing. Pictures were also taken of soil profiles and typical surface landscaping features of both the red and black soils. These pictures were taken both as colored slides and black and white prints. All of these pictures are being cataloged, labelled and will be left in the ICRISAT file. It is hoped that these pictures will, in the years to come, have historical significance as well as showing early research and development.

#### Soils of the 1972 experimental area

Two experimental sites of about eight hectares were chosen, one representing red soil and one representing black soil. (The same experiments were planted both on the black and the red soil sites). The criteria for choosing the two sites were as follows:

Convenient to the front area;  
Convenient to temporary road;  
Convenient to dug wells for possible supplemental irrigation; slope less than 0.5% so that no land grading was necessary beyond that required for removal of brush clumps and old boundary bund.

Representativeness of the black and red soils of the ICRISAT area.

The soil samples were taken from both sites and analyses made.

#### Land Preparation and Planting Operations

Red soil - After the removal of brush and old boundary bunds, the area was chiselled in two directions to a depth of 30-45 cms, depending on the hardness of the subsoil. The chiselling operation was done for two reasons: 1) To break up the compacted clay subsoil, and ii) to break loose the brush roots so they could be removed before the planting operations. Discing was then required to break up the large clods and prepare the seedbed. The area was then floated to fill the micro-depressions, before spraying with aldrex @ 2 kg/ha of active ingredient to control termites. (This area was heavily infested with termites, which occurred in the brush clumps and sorghum stubble). The field was disced immediately to incorporate the aldrex. The area to be planted with 75 cm rows was



then ridged, ring rolled and planted, using the belt-type planter. The inter-cropping area which was planted in 45 cm rows with the Swastik grain drill was not pre-ridged, but small furrows were made with 3 ridge shovels mounted on the drill.

Black soil - After the brush and bund removal, the only land preparation required on the black soil was one discing. No aldrex spray was given because no termites were observed in the black soil site. The ridging and planting operations were the same as for the red soil.

Many difficulties and challenges were encountered in assembling the necessary seed, fertilizer and experimental equipment; borrowing and preparation equipment; borrowing, buying and adapting planting equipment, renting wheel tractors and hiring and training field men and laborers. The biggest problem, however, was the renting of wheel tractors in time to start the ridging and planting operation on time. The delay in the onset of the monsoon (about two weeks) gave us extra preparation time and we were able to start planting on June 24th - 5 days after the gradual start of the monsoon rain.

#### Weather conditions

During the first crop season at ICRISSAT, the Hyderabad area experienced the "worst drought on record". The monsoon was about two weeks later than normal, and the

quantity of rainfall during each month was far below normal. The total was less than half normal over the period May through December. The worst drought period was from July 4 to August 20. During that period, minimal supplemental irrigations were given to all experiments, drawing water from the nearby dug wells. The amount of water applied was 2-3 cm in the black soil and 3-4 cms in the red soil experiments.

### RESULTS OBTAINED

#### Trial 1 - Date of Planting Study

This trial involved 3 crops using four dates of planting at 10 day intervals. The first date of planting was June 24th in the black soil and June 29th in the red soil.

- A. Sorghum - The second dates of planting was consistently the best in both the red and black soils.

The average relative rank for date 2, 1, 3 and 4 was 100, 85, 62, and 27 respectively. The fourth date of planting had a serious attack of shoot fly and was a near failure in both soils. In Date 3 the yield reduction was due to a combination of reduced growth and shoot fly damage. The reason for the yield reduction in date 1 as compared to date 2, is not known, but it is believed to be due largely to bird damage on the first date, since this was the only crop in the areas for birds. Data from

the All-India Sorghum Improvement Program (AICSIP)<sup>1/</sup> indicate that sowings at the onset of monsoon were consistently better than delayed sowings. Since trial 2 and trial 8 were planted at the same time of the first date of planting, the general yield level is expected to be somewhat lower than if the planting date had been delayed 10 days in this particular season.

The four varieties used in this experiment were: Experimental hybrid - 2219A x CS 354. CSH-1, 302 and 604. The average relative yield level for Experimental hybrid, CSH-1, 302 and 604 was 100, 99, 78 and 64, respectively. Although the average yield of experimental hybrid and CSH-1 were nearly the same, the experimental hybrid exceeded CSH-1 by about 10% of the black soil, but was about 9% below CSH-1 on the red soil. The highest yield occurred at the second date of planting on the black soil. The yields of CSH-1 and experimental hybrid were 59.5 and 58.9 q/ha., respectively. The general yield level of the red soil at the first and second planting dates was about 76% of that of the black soil. This superiority of the black soil is believed to be due to greater water-holding capacity and lower degree of moisture stress throughout the growing season.

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<sup>1/</sup> Singh, M., B.A. Krantz & G.B. Baird, "Agronomic Production Techniques in Sorghum". Proceedings of the International Sorghum Symposium, Oct. 1971.



The days to flowering was consistently reduced with the later planting dates. The number of days to 75% flowering for the 1st, 2nd, 3rd and 4th dates are 65, 59, 54 and 52 days.

The general yield trend of green and dry fodder was similar to those of grain but the yield reduction in fodder due to later date of planting was less than that of the grain. The relative fodder yield of the four varieties was in reverse order of that of the grain yield. The relative yield for 604, 302 experimental hybrid and CSH-1 were 100, 85, 67 and 61, respectively. The fodder yield of the red soil was about 87% of that of the black soil in the first two dates of planting.

B. Pearl Millet - The four dates of planting of the pearl millet trial was exactly the same as for sorghum given above. The varieties used were HB-1, HB-3, HB-5 and K-559.

Late planting dates had much less effect on yield in pearl millet than that of sorghum. In the red soil, the average yields for the 1st, 2nd, 3rd and 4th dates were 32.0, 33.2, 28.4 and 26.3 q./ha., respectively. In the black soil, the respective yields were 16.3, 29.9, 31.7 and 27.2. The general yield level of the black soil and the red soil was quite similar at the last three planting dates. However, at the first planting date, the yield level of the black soil was greatly below that of any planting date on either soil. The reason for the extremely low yields on the black soil is believed to be due to a

combination of both slightly poorer seed set and heavy bird damage. It is noteworthy that the yield reduction was in the first date of planting on the black soil was consistent in all four varieties.

The average relative yield level on both soils for HB-5, K-559, HB-3 and HB-1 was 100, 97, 95 and 93 respectively, showing that the general yield level of these four varieties was not strikingly different as in the case of sorghum. The highest average yield in both soils was about 35 q./ha.

The average number of days to 75% flowering for dates 1, 2, 3 and 4 were: 54, 53, 46 and 39. There was no appreciable difference between varieties in flowering date on either soil.

#### Trial 2 - Fertilization experiment

This experiment involved three crops at five rates of nitrogen, three rates of phosphorus, two rates of potassium. There was a marked early growth response to Phosphorus in sorghum and pearl millet in both soils which carried through to a yield response. In pigeon peas there was only a slight seedling growth response to phosphorus. In the red soil, nitrogen application increased the pearl millet yields from 12.8 q with 0 nitrogen to 27.8 q/ha in the high nitrogen treatment. The response to nitrogen application was somewhat less on the black soil. There was no response to potassium on either soil. The yield

of the plot receiving adequate nitrogen and phosphorus in the red and black soil was 27.8 and 30.7 g/ha, respectively. In dry fodder yield, there was likewise a response to nitrogen and phosphorus, but no response to potassium.

### Trial 3

This trial involved various placements of N and P fertilizer at planting on two varieties - CSH-1 and CSH-3, with and without carbofuran. This experiment was planted on July 15, at the time when shoot fly infestation would be expected. However, due to the drought this year, there was no appreciable shoot fly infestation, so we were unable to study the effect of treatments upon shoot fly damage. There was no difference due to carbofuran treatment at either location, so the values for carbofuran and no-carbofuran were combined. The yield of CSH-1 was consistently better than that of CSH-3 in both experiments. The yield of CSH-3 was 73% of the yield of CSH-1 in the red soil and 93% for that of the black soil.

There was a marked seedling response to phosphorus application, especially on the red soil. The treatment without any fertiliser looked very similar to that of the minus phosphorus treatment. The treatment with Pelleted ammonium phosphate (N 24, P26) applied in a band, 2" to the side of the seed, consistently gave the best yield. In the red soil, this treatment yielded 30.3 g/ha, while



the minus phosphorus and no fertilizer treatment, yielded only 10.6 g/ha. Ample nitrogen was applied as a topdressing in all treatments. The plot with phosphorus alone (-N) applied at planting, yielded 22.4 g/ha. The yield response of CSH-3 was similar to that of CSH-1, but at a lower level. The broadcast application of NP fertilizer at planting was visually inferior to that of the band application, and this difference carried through to final yield.

In the black soil, similar responses were obtained, except that magnitude of the response was considerably less, particularly for that of phosphorus application. Treatment 4 with NP fertilizer banded was again the best. The yield for CSH-1, CSH-3 for this treatment was: 41.3 and 40.7 respectively in the black soil.

In an attempt to stimulate early seedling growth, NP fertilizer was applied with the seed at the same rate as that of the band application and at  $\frac{1}{2}$  of that rate. In the red soil, there was severe reduction in stand due to the full rate and moderate reduction in stand even with the half rate. In the black soil, the stand reduction to these with-seed treatment was less, but still observable. Even where plants emerged normally, the growth response to fertilizer with the seed was never any greater than that from the band application. The so-called "pop'up" method of placing the fertilizer with the seed, which has been shown to be successful in maize in the United States, does

not appear to be adapted to sorghum under ICRISAT conditions. A repeat planting of this experiment was made at the end of August. A similar severe stand reduction was observed due to fertilizer placement with the seed in the late August planting. Thus, the fertilizer placement with the seed showed no advantage over that of band placement and has the distinct disadvantage of probable stand reduction.

There was heavy infestation of flea beetle in the early seedling stage on the black soils as well as heavy infestation of shoot fly in both soils. The effect of carbofuran was outstanding not only in shoot fly control, but also in flea beetle control in the black soil. In the plots without carbofuran, over half of the seedling plants were "killed" by the night-feeding of flea beetles. Where the carbofuran was used there was no flea beetle injury or shoot fly injury. There was also a marked seedling response to phosphorus application in the red soil in both the carbofuran and no-carbofuran treated plots. This latter experiment has not been harvested as yet, so the yield will be discussed later.

The dry fodder yields showed a similar trend to that of grain yields, but the magnitude of the difference was less than that of grain yields. The number of days required to reach 75% flowering was greatly increased in the treatment "No fertilizer" and minus phosphorus treatments. These two

treatments required about 80 days to reach 75% flowering, while the treatment for NP banded required only 56 days, in the case of CSH-1. The differences in flowering due to fertilization were similar in the CSH-3, but of lower magnitude.

#### Trial 4 - Shoot fly tolerance variety experiment

In this experiment, 8 shoot fly tolerant selections obtained from Dr. N.G.P. Rao were compared to CSH-1, CSH-3, CSH-4 and the local sorghum grown in the ICRISAT area. This experiment, like that of trial 3, was planted in mid-July, with the expectation of severe shoot fly infestation. However, because of the drought no appreciable shoot fly damage occurred and thus, there was no opportunity to study the shoot fly tolerance of these varieties. We did, however, make crosses of these 8 varieties and all possible combinations. The seeds from the crosses will be turned over to the Sorghum Breeder, when he arrives. The insect tolerant varieties are all tall-growing, local types, which produced a high fodder yield on both the red and black soil. The yields ranged from 81 to 158 q/ha. It is interesting to note that on the black soil, the grain yield of several of the shoot fly tolerant entries were almost equivalent to that of hybrids. In the red soil, the yield of the shoot fly tolerant varieties was much poorer than that of the hybrids. This is particularly true of the late-maturing varieties which were severely damaged



by the late-season dry conditions in the red soil. An August planting of this trial was likewise made in both the red and black soil. It is interesting to note that the shoot fly tolerant varieties not only showed considerable tolerance to shoot fly but showed a high degree of tolerance to flea beetles.

Trial 6 - Pigeon pea - soybeans intercropping experiment

The pigeon peas have not been harvested as yet, therefore only the soybeans yields can be discussed at this time. The Bragg variety of soybeans has a determinate type growth and appears to be quite photo-period sensitive. At ICRISAT, it started blooming at about 30 days, compared to 45 days at Jabalpur. Under these conditions, the plant size was quite small when flowering started particularly under the moisture stress condition on the red soil. Despite this, there appeared to be a heavy pod set particularly on the black soil. The average yield of the solid planted beans on the black soil was 16.7 q/ha. In treatment 2, the alternative rows of soybeans and pigeon peas, the per row yield was 22 q/ha. In the red soil, the yields of solid planting and alternate row-planting was 8.2 and 9.8 q./ha., respectively.

Visual observations indicated that the soybean was much more sensitive to drought than that of companion pigeon pea plant. The soybeans likewise appeared to be more sensitive to drought than the pearl millet in trial 7,

which was grown adjacent to trial 6. In spite of the small vegetative growth of the Bragg variety of soybeans this season, the yields on the black soils are encouraging enough to warrant further investigation of other varieties which might fit in to an intercropping system with pigeon peas.

This year, soybeans stubble was removed and a rabi crop planted in its place. Removing the soybeans stubble and preparing a seedbed in the dry soil between the full-grown pigeon pea plant was extremely difficult and only partially successful. On the basis of this year's experience, this experiment will be redesigned to omit any seeding of rabi crops in between pigeon pea. Further discussion on this experiment will be delayed until the pigeon peas have been harvested.

Trial 7 - Pigeon pea-pearl millet intercropping experiment

In this experiment, solid plantings of each crop was compared to alternate single row and double-row plantings of each crop. Sub-plots were established involving various times of harvest for fodder and grain as well as ratooning and multiple harvest of fodder and grain. Pearl millet is a fast-growing, short-season crop which was able to effectively utilize the extra space in the alternate-row pattern, while the pigeon pea crop was being established. Since the pigeon peas have not yet been

harvested, the discussion will be limited only to pearl millet yields.

Black soil - This experiment was planted on July 10th and the first fodder harvest was made at the flowering stage 49 days after planting. (On harvesting the ratooned crop, care was taken not to cut or injure the small tillers which were in profusion around the main stocks). At 70 days, the second fodder harvest was made and again allowed to ratoon. The third harvest for grain was made on November 15th at 138 days. In the alternate planting on a per-row basis, the first fodder harvest averaged 44.5 q/ha., the second 26.3 q./ha., making a total of 78 quintals of high quality fodder on the dry-weight basis. The third harvest made on November 15th produced a grain yield of 11.5 quintals of grain. Observations in this preliminary study indicate the justification for further study of earliness and ratoonability of pearl millet as an inter-crop with pigeon pea. In the companion sub-plots, where the second crop was harvested for grain at 109 days, produced 31 q/ha., in the alternate-row treatment, thus giving 44.5 q/ha of high quality fodder crop on first cutting and a good grain crop in the second harvest. In most of the remaining sub-plots, grain only was harvested on the 70th day. Grain yields in these plots for solid planting averaged 36.7 quintals. The pearl millet grain yield in the solid planting and alternate planting



treatments were 36.7 and 60.8 q/ha., respectively. These yields are on a per-row basis. Since only half the area is considered to be in pearl millet and half in pigeon peas, these values will both be divided by two and the pigeon values added to them. These yields do, however, indicate that the pearl millet in alternate rows was able to utilize the extra space early, while the pigeon pea was being established. It remains to be seen how much the pigeon pea yields were reduced by the inter-planting procedure. However, at this moment, the results look very encouraging. Further studies are needed to put an economic value on high quality fodder, as compared to the fibrous low quality fodder normally produced, sold in tall growing pearl millet plants.

The yields of the red soils have not been completely summarised as yet, but a casual study of the data indicate that the treatment responses are similar to that of the black soil, but at a slightly lower yield level.

Trial 8 - Sorghum and Pearl Millet Variety Trial:

Black soil - The average sorghum grain yield for CSH-1, CSH-3, Swarna and "Local" was 40.6, 39.6, 34 and 37.7 q/ha., respectively. In the pearl millet trial, the average grain yield for HB-5, HB-4, HB-1 and Vijay was 33.4, 27.4, 20.5 and 14.3 q/ha., respectively. Sub-plots of the pearl millet experiment were also harvested for fodder at the flowering stage and allowed to ratoon, and then harvested again for

fodder. The HB-5 produced the highest yield with a dry weight yield of 102.5 q/ha in the first cutting and 26.4 on the second cutting.

In the red soils, the yield levels were lower than that of the black soil. The highest sorghum yield obtained was again CSH-1, with a yield of 36.7 q/ha. In the pearl millet variety trial, HB-4 was the highest with a yield of 22.3 q/ha.

#### TENTATIVE PROPOSALS FOR RESEARCH ON FARMING SYSTEMS FOR SEMI-ARID TROPICAL CONDITIONS

##### Introduction

The semi-arid tropics are characterised by a short (2 to 4 months) monsoon and a long (8 to 10 month) dry season. The wet season is typified by erratic rainfall patterns with periodic high intensity rainfalls interspersed with periods of sparse rainfall. Some soils have low infiltration rates and relatively high water holding capacities, others may absorb water quickly but hold little moisture. Particularly on the heavier soils erosion is a serious problem resulting in the loss of valuable top soil and sedimentation of tanks and drainage ways. Excess water sometimes causes flooding resulting in damage to standing crops. Thus, water, either too little or too much, is one of the major constraints in farming under conditions of natural rainfall.

In most of the semi-arid tropics agricultural production is low and unstable; most of the people live at near-subsistence levels. With the improved health facilities of recent years the death rate has been greatly reduced resulting in a "population explosion" and a greater demand for food, feed and fiber. This situation has in turn caused more intensive land use, exposing the land to even greater erosion hazards. The basic resources of many areas in the semi-arid tropics would seem to provide considerable scope for higher agricultural production. However, the appropriate techniques for this improvement are not apparent and must be developed through research.

#### Objective

To generate economically viable farming systems which provide for increased, stabilized and diversified agricultural production in semi-arid areas while maintaining or improving the productive potential of the resource environment.

It is well understood that this general objective will be realized in a step-wise process by recognizing the more immediate opportunities for improvement; while striving toward what is "technically possible", the research program ought to keep in view "probabilities" at the farm level. The watershed will be taken as the basic unit for improvement. No miracle solutions are expected; rainfed agriculture will forever be a "gamble with the monsoon". However, it appears



feasible through research to learn how to utilize the natural resources of the semi-arid tropics more dependably and more effectively. The ultimate goal will be to increase the quality of life for all people in these communities and in society as a whole.

Some guiding principles in soil, water and crop management to be followed in developing farming systems for the semi-arid tropics:

1. Develop a vegetative cover as early as possible during the monsoon season and maintain this vegetative cover throughout the period of expected high-intensity rainfall.
2. Plant and till on graded contours (depending on the slope of the land) to encourage maximum infiltration of water into the soil and provide a safe, non-erosive means of leading the water into a tank or disposal outlets.
3. Harvest crops at physiological maturity and plough or disc the soil immediately after harvest before soils become completely dry and hard. (If this is not possible, plough or disc after the first spring or pre-monsoon rain).
4. In black clay soils, where ridges and furrows may be desirable, prepare them on graded contours after pre-monsoon showers.
5. Plant as early as feasible at the onset of the first monsoon showers.

6. Develop various alternative cropping systems which will provide the following:

- a. Full utilization of the monsoon season and the use of as much of a subsequent season as possible under the given water and soil resources of the watershed or catchment. (In the ICRISAT area, 6 to 8 months of cropping would be attempted).
- b. Minimum requirement of land preparation or tillage with little or no tillage in the transition between monsoon and pre-monsoon crop.
- c. Provide food, feed, fibre and cash crops in line with local food preferences and available or potential markets.

#### TENTATIVE PLANS FOR 1973

#### I. Experiments in present black and red soil site:

- A. Continue developing basic agronomic information
  - a. needed for formulating various crop systems. With the experiences and information gathered from trials 6 and 7 in 1972, the following trials are suggested for 1973.
    1. Intercropping of medium season, high-yielding pigeon pea varieties with crops, such as cowpeas,

soybeans, or early sunflower to establish rapid ground cover for erosion control and interception of radiant energy while pigeon peas are being established. The intercrop will be harvested as early as possible (August) to give the pigeon peas full utilization of space and moisture during the late monsoon and post-monsoon periods.

2. A revised pearl millet-pigeon pea intercrop and ratooning experiment.
  3. Sorghum for grain with relay plantings of various rabi crops.
  4. Pearl millet for grain with relay plantings of various rabi crops.
  5. Pearl millet ratoonability variety screening trial.
  6. Sorghum ratoonability variety screening trial. (Trial 5 and 6 will include optimum timing for ratooning and relationship to insect and soil moisture extraction problem).
  7. Investigate and screen various grass and forage legumes for year-around forage production and erosion control in grass waterways.
- B.I. Response of all major crops to ridged kharif planting on black soil as well as on red soil.



The three treatments are:

1. Ridged planting
2. Flat planting
3. Flat planting and ridging after some time

One and two rows may be planted on ridges of various sizes. Low vs optimum levels of Nitrogen will be used as a split plot.

II. Response of all major crops planted on ridges to minimal supplemental irrigation during both the kharif and rabi seasons on black and red soil. The following four irrigation treatments are suggested:

1. No irrigation-rainfall only.
2. Optimum irrigation (irrigated at 50% available moisture in the rootzone).
3. One minimal irrigation (probably 50 mm) at a critical stage in the crop cycle.
4. Two minimal irrigations (probably 50 mm each) during critical stages in the crop cycle.

Treatments 1 and 2 are "controls" at each end of the irrigation spectrum. Treatment 3 and 4 will be adjusted to fit the seasonal rainfall with the aim of receiving the greatest benefit from a minimal supplemental water supply.

III. Preliminary work on experimental watersheds (catchments).

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Treatments 1 and 2 are "controls" at each end of the irrigation spectrum. Treatment 3 and 4 will be adjusted to fit the seasonal rainfall with the aim of receiving the greatest benefit from a minimal supplemental water supply.

III. Preliminary work on experimental watersheds (catchments).

1. Make a topographic survey defining and delineating the area and the contours of a number of watersheds.
2. Make a detailed soil survey of the watersheds. Convert present meandering gullies into a straight broad-channelled grassed waterway.
3. Start contour plantings of some kharif-cum-rabi cropping systems on one or more experimental watersheds.
4. Set up water stage records and V notch weirs to measure runoff and sediments from a number of experimental watersheds.
5. Install water stage records in the two railroad underpasses.
6. Make preliminary surveys of other possible experimental watersheds.

IV. Other preliminary studies and investigations

1. Make preliminary studies of the climatological and hydrological data in relation to expected runoff and water harvest in various cropping systems, soils and slopes on proposed ICRISAT watersheds.
2. Develop preliminary plans for tank technology research.



3. Outline preliminary plans for research on the development of various low-cost supplemental irrigation systems for using limited tank and well water supplies.
4. Prepare preliminary plans for studying the economics of constructing of tanks and providing minimal supplemental irrigations on donor watersheds.

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BUILDINGS, FURNITURE AND EQUIPMENT

5.01 Existing Organization and Administration

5.01.1 Professional Technical Services

Professional technical services are amply provided throughout all of India both by public agencies and private firms. Generally, educational buildings up to and including secondary and post secondary levels are always designed by the State Government concerned. University buildings also have been designed by state public works departments in the past, but the trend in recent years has been to permit private architectural and engineering firms to be engaged in design work, in keeping with the autonomy of all universities.

5.01.2 Public Agencies

The Government of India as well as the State Government include a Public Works Department (P.W.D.) in each case headed by a Minister and a Chief Engineer. These departments implement on behalf of 'Client' Ministries the design and construction of their physical plant requirements. When a project is accepted and included in the budget approved by the legislature, the relevant ministry briefs the P.W.D. as to its precise requirements and the amount of money budgeted in the fiscal year. P.W.D. then prepares detailed plans and tender documents, handles the complete tendering procedure and supervises the construction work both technically and financially.

In Tamil Nadu the cost of technical services rendered by P.W.D. varies from 5% to 10% of the building cost depending upon the type, complexity and location of the building, but excluding the cost of one or more full time supervisory clerks of works (engineers).

Besides the Central Offices located in the State Capital, each P.W.D. has sub offices distributed throughout the State which are mainly responsible for supervision, building maintenance and minor new construction. The district officers submit periodical reports on all works under their control to the Central Office.



### 5.01.3 Private Firms

There are a considerable number of private firms throughout India providing professional services in the fields of surveying, quantity surveying, architecture and engineering (civil, mechanical and electrical). The principals are required to maintain annual membership in their respective professional associations at the national level. (Annex A-V-1). Generally, larger architectural works in Tamil Nadu are executed by one of the several large architectural/engineering firms in Madras, although firms from Calcutta and Bombay have also been previously engaged. There are smaller architectural firms in Coimbatore, Madurai and Bangalore although these firms may not have the depth of staff to undertake large projects.

5.01.4. Architects and/or Engineers commissioned to design State Government buildings are required to hold registration in that State. Often private firms may be engaged to prepare the design and tender document only with tendering, awarding of contracts, supervision and progress payment procedure handled by the State P.W.D. However, for day-to-day supervision of major projects, the private architectural or engineering consultant firm may provide an experienced and qualified staff member as clerk-of-works whose salary is paid for separately by the State Government.

5.01.5. The current scope of professional services rendered by private architectural firms is set out in the 'Conditions of Engagement and scale of Professional Fees and Charges' as issued by the Indian Institute of Architects (I.I.A.) (abstracts are given in Annexe A-V-2). No foreign architects have been employed for any government project in India in recent years.

### 5.01.6 Working Language and Method of Measurement:

English is the working language for all project documents in the Central and State Governments. The indigenous language of Tamil Nadu is Tamil followed in order by Telegu, Malayalam and Hindi.

The Imperial system (i.e. feet and inches) has been in practice in both government and private practice until very recently. The Government P.W.Ds. are presently



switching over to the Metric system (i.e. metres) but private architectural and engineering firms tend to continue to use the Imperial system on private work, but use the metric system when engaged on government work.

## 5.02. Building Standards

### 5.02.1. Building Standards and Regulations

There are a considerable number of building standards and regulations in India and are partly advisory and partly statutory in character. Their applicability also varies according to client (i.e. government vs. projects in the private sector) and location (i.e. urban vs. rural areas) of the buildings to be constructed.

#### a) Building Standards

The Indian Standards Institution published the National Building Code in 1970 which sets out all current building standards. The State P.W.D's have adopted the National Building Code in all public buildings. In Tamil Nadu the State P.W.D. and all private firms comply with the Madras Detailed Specification (M.D.S.S.) common building code. Excerpts pertaining to University minimum requirements are given in Annexe A-V-3.

#### b) Building Regulations

Building regulations are concerned mainly with town planning and public safety (i.e. structural and fire resistance of buildings). Town planning regulations complemented by applicable urban by-laws are applied mostly to urban areas in those cases where building permits are to be obtained from the respective Departments of Building Inspection. However, for government buildings (including universities) no permission from any urban authority is required. In major P.W.D. projects, control is exercised in liaison with the State Chief Engineer and Chief Architect but this does not apply to other works in the private sector.

### 5.02.2 Planning Standards

University buildings are normally designed in accordance with the norms laid down by the University Grants Commission (U.G.C.). The Indian Council of Agricultural Research (I.C.A.R) has recently prepared a provisional guideline for the construction of Agricultural Universities. The space standards



(i.e. room sizes etc.) are based on the U.G.C. norms but include some supplements and deviations (Annexe A-V-4). As yet the above two guideline norms have not been correlated into a comprehensive set of revised I.C.A.R. norms but interpolation between both authorities is presently accepted.

### 5.02.3 Services

Within urban areas the primary services (water supply, storm water disposal, sewage disposal and electricity) are generally supplied by public agencies. In rural areas (i.e. village and/or town level) the population often has to rely on their own resources which can vary in degree.

#### a) Water-supply:

Within urban area, water is generally supplied by the City Corporation. This water is chemically treated for acceptable purity (Public Health Department). Supply in rural areas is from river, lake, well or tube-wells depending on location and availability. University campuses, being generally outside urban built-up areas generally arrange for their own individual water system involving deep wells, electric pumps and water-storage towers. This method of water supply is existing at the Tamil Nadu Veterinary College, Madras and at both University campuses at Coimbatore and Madurai.

#### b) Drainage, Waste Water and Sewage Disposal:

Central urban areas generally have public sewage systems including sewage disposal. In urban fringe areas and in rural areas, storm run-off is carried away in open channels to ponds or low-ground areas. Sewage disposal is directed to large septic reservoirs, tanks, or absorptive surface disposal fields. There are also an increasing number of small treatment plants and/or oxidization ponds. Campus universities generally provide their own systems and are not often on public disposal lines.

#### c) Electricity and Gas supply:

Electricity is available in all urban areas and all campus Universities are well served, although power failures occur during peak demands. The rural electrification plan is steadily being enlarged and should be completed in Tamil Nadu by the end of 1974. Gas for laboratory use is usually supplied in bottles but some Universities have their own gas



generating plant. Hot water is generally heated by means of electricity.

#### 502.4. Sun Protection, Heating and Ventilation:

In Tamil Nadu, except near the coast areas, the prevailing wind is generally south west to north east and vice versa. Consequently educational buildings are mostly oriented on an northwest /south east axis in order to receive maximum natural ventilation. Thus sun protection relies mainly on balconies and extended roof overhangs, supplemented by masonry perforated screens of bricks or concrete blocks, louvered shutters, and roll-up bamboo shades. No heating is provided in Tamil Nadu as winter temperatures seldom depress below 17°C (63°F). Ventilation of rooms is achieved by cross ventilation through open windows, passage-ways and openings at the tops of interior walls. Better quality construction often provides for a double-attic roof structure, and most rooms are provided with ceiling/<sup>fans</sup>for positive air movement and cooling. Air conditioning in educational buildings is generally provided only to those areas requiring temperature control (i.e. certain laboratories).

#### 502.5 Climatic Conditions and Natural Hazards:

a) Climatic conditions vary in different parts of India. Comprehensive information can be obtained from the publication 'Climatological and Solar Data for India' prepared in 1969 by the Central Building Research Institute, Roorkee.

The table below indicates some basic data for the Madras, Coimbatore and Madurai regions, representing average figures in recent years:

<u>Temperature</u>	MADRAS	COIMBATORE	MADURAI
Max.	37°C (99°F)	36.5°C (98°F)	36.8°(99,5°F)
Min.	19.8°C(67°F)	18.1°C (65°F)	19°C (66°F)
<u>Humidity</u>			
Max.	97%	94%	95%
<u>Rainfall</u>			
(Annual average)	51.1"	43.6"	
<u>Climatic</u> -	Tropical throughout the year, hot and humid from July through November.		



Maximum rainfall is confined to the monsoon seasons generally starting in late July and ending in late November with the heaviest portion falling in late October and early November. The monsoon period actually comprises two phases, the first from July to August from the south west and the second in October and November from the north east with a dry period during the month of September.

b) The State of Tamil Nadu is affected by a number of natural hazards such as seasonal flooding, droughts, and cyclones in coastal areas but there have been no severe earthquakes recorded in this State.

### 5.03. Contract and Building Procedure

#### 5.03.1 - Building Contractors

a) Contractors to be eligible for construction of government buildings have to be registered with the State P.W.D., and pay a registration fee. In Tamil Nadu there are three categories of contractors based upon equipment, size, financial status and past experience. Accordingly all qualified contractors for P.W.D. work are assigned to one of the following three categories:

Class I	1,000,000 rupees and above.
Class II	Upto 500,000 rupees
Class III	Up to 100,000 rupees

There are no foreign contractors doing work presently in India. There are several Class I general contractors in Madras, also in Calcutta and Bombay. There are several Class II general contractors in Coimbatore and Madurai. Though tenders for the proposed new construction work for Tamil Nadu Agricultural University will be advertised in several large Indian newspapers, it is expected that Tamil Nadu Contractors will likely submit the lowest tenders.

b) Sub-contractors generally are employed by the general contractor, although the larger general contractors often have permanent staff in most sub-trades including masonry, carpentry, concrete, and plastering. On large projects, the general contractor may engage sub-contractors for such items as aluminium windows, glazing, painting and passenger lifts.

c) Skilled labour (e.g. carpenters, masons and concrete workers) is quite plentiful in major cities and to a lesser



extent in medium sized towns. Unskilled and semi-skilled labour is easily available in most areas in India. All labour is performed manually and mechanical equipment is seldom used except for simple operations such as a mechanical concrete mixer for concrete work. Sturdy, efficient scaffolding comprised of bamboo poles with rope ties is often used on buildings, even up to ten storeys in height.

d) When specialized equipment is required to be imported from abroad (e.g. ventilation and multi-zone air-conditioning equipment), the general contractor is required to obtain an import licence from the Central Government at Delhi (Chief of Construction Import CCI). He is required to pay all duties and excise taxes prior to taking delivery of the equipment.

#### 5.03.2. Tendering Procedure:

a) Tender bids are invited from qualified general contractors through local, state and national newspapers. The tender documents are issued by the State P.W.D. or by private architectural firms as the case may be. On receipt of plans and specifications the contractor has pay a minimal deposit (eg. 100 rupees), refundable when the plans are returned with his tender.

b) The tender bids are submitted to the agency which issued the documents accompanied by 'earnest money' equivalent to  $2\frac{1}{2}\%$  of each contractors tender. The tenders are opened publicly in the presence of the clients, P.W.D. or private architect, and the other bidding contractors.

c) Usually, the lowest tender is accepted. The  $2\frac{1}{2}\%$  earnest money is refunded to the unsuccessful tenderers. The  $2\frac{1}{2}\%$  earnest money of the low-bidder is retained and during construction a further  $2\frac{1}{2}\%$  is retained from each of his progress payments such that at completion of the building a total at 5% is withheld. At the completion of the project, the contractor is refunded his original  $2\frac{1}{2}\%$  earnest money. Upon expiry of the One Year Defects Liability Period, he is then refunded the remaining  $2\frac{1}{2}\%$  withheld during the construction period.

a) Most building contracts are based on a fixed rate per quantity system (eg. cubic foot or cubic metre). Periodical payments are made according to the quantity of



work completed and as measured by the quantity surveyor or similar qualified personnel. However, in some cases, lump sum contracts are specified. Payments to the contractor vary according to client. Some clients pay the contractor once a month, or once every two months, upon receipt of paid vouchers. The Tamil Nadu P.W.D. pay in four instalments.

- 1) At plinth level (completion of foundations),
- 2) At lintel level (over doors and windows),
- 3) At roof level, and
- 4) At completion, including all finishing items.

b) In all tenders, the bidding contractors are issued a complete list of quantities for all components in the building. The contractor has to submit with his tender price, a unit price (including labor and profit) for each of the numerous building components. His tender sum is the total addition of all such sub-item components.

c) On large contracts where the initial purchasing costs are high, or when the contractor is required to place a deposit with his order for major items which may require several months delivery time, the client often advances upto 90% of these costs to the contractor shortly after contract signing. Insurance is generally required for protection of the contractors employees but public liability insurance is seldom requested. Insurance for replacement of building materials (eg. fire) is seldom imposed in the contract documents and such insurance if desired by the client is separately placed and paid for by the client.

#### 5.04. Construction and Materials

##### 5.04.1 Architectural Characteristics of Local Educational Institutions:

The general type of construction for all educational buildings in Tamil Nadu, as indeed in nearly all other types of buildings (office buildings, apartments etc.) is of reinforced concrete construction. Whether single storey, double storey or multi-storey construction the structural frame comprises concrete columns with heavy concrete main beams interspaced with concrete lateral beams at 8'-0" or 10'-0" on centre with monolithic two-way reinforced concrete floor slabs and roof slabs. Foundations are shallow (approx. 4'-0" deep) and the roof usually consists of a sloping layer of 'jelly concrete' (crushed brick concrete) poured on top of the structural roof slab and surfaced



with 1/2" thick quarry tiles. All exterior walls are 9 inches or 13 1/2 inches thickness of brick, with interior walls of 4 1/2" wide brick. All interior and most exterior surfaces are plastered and painted. Windows are generally wood (often steel or aluminium) and all doors are generally solid or hollow core teak wood. All floors are tiled with 1" terrazzo tiles in public areas corridors and washrooms and are generally painted or are of exposed trowelled concrete in classrooms and office areas. Lighting is generally supplied with individual suspended single or double lamp fluorescent fixtures in prime areas. In secondary areas (storage, washrooms etc.) lighting may be suspended incandescent bulbs in glass shades. In washrooms and some laboratories, walls are often clad in terrazzo tile dadoes to a height of approximately 4'-0". Most educational buildings of better quality (eg. University buildings) have wide exterior corridors about 6'-0" wide supported on slender concrete columns. The architectural style of most modern college and university buildings is quite contemporary and functional, with some older institutions reflecting historical Indian architecture. Very few buildings utilize structural steel construction because of the high cost of steel.

#### 5.04.2. - Building Materials:

a) India produces almost all of her own building materials and generally for educational buildings no building materials are imported. Structural steel, steel reinforcing bars and cement are all produced in India but these latter products are issued under control by the Central Government. of India. Contractors must apply well ahead of time for the allocation required and often this results in considerable delay before the materials are received on the job site. The price of these particular items are controlled by the Central Government and all have drastically risen in price in the past six months. The current price for cement is Rs.350/- per ton and for reinforcing steel is Rs.3,600/- per ton.

b) Generally all building materials required for educational buildings are readily available throughout the country. Bricks and concrete making materials generally constitute the majority of construction work and are



available locally in almost all areas.

c) In Tamil Nadu there is an adequate road system with the majority of roads being paved. However, heavy trucks are expensive and in short supply and the increased cost of petrol recently is seriously curtailing motor transport. Consequently heavy freight is generally transported by rail through a reasonably good distribution network, and at reasonable cost.

#### 5.05. Maintenance of Educational Facilities:

##### 5.05. 1 - General Condition of Existing University Buildings

a) Coimbatore: The academic buildings generally fall into two categories. The main (and original) building, built in 1909, is a very complex structure, classically styled in a combination of Indo-Saracenic design and is constructed of red brick with many historical Indian embellishments. It is located as the keystone building on the campus and is flanked by two long two-storey brick buildings which house the academic facilities, library and auditorium, and were erected in 1935. This complex is well built, sound and in good condition. There are several other academic buildings of smaller size which were built in the last decade (e.g., Agricultural Engineering Faculty). These are in excellent condition. To the rear of the campus is a large 'communal village' of student hostels, staff residences and ancillary facilities. In addition to the two large hostels (3 storey reinforced concrete, built in 1967) which house 420 male students, there are several 'avenues' of one storey older-type hostels which house an additional 400 students. These latter hostels built in the year 1925 are solidly built of brick walls with brick tile roofs and have large wide covered verandahs. They are in very good structural condition and require only minor modifications such as modern electrical fixtures (3 to each room). However, the separate communal ablution and toilet building located in numerous convenient places are in a very poor condition and larger new facilities should be provided. A new campus plan is required to locate new buildings logically and for long term campus development. The total area of the Coimbatore campus is 750 acres (300 ha.)

b) Madurai - This is a relatively new campus commenced in 1965 on 363 acres of land. The main academic building of



impressive contemporary design was built in three stages and is in excellent condition. All other buildings including student hostels, staff residences, farm buildings and ancillary buildings are also in excellent condition.

c) Madras Veterinary College (new Tamil Nadu Veterinary College)

This site comprises two separate parcels and is located in the central section of Madras. The academic and animal clinic buildings are located on the main campus occupying an area of 16 acres. Located about 1/8 mile distant is the separate student hostel area on a site occupying approximately eleven acres. The administration building, built when the College was founded in 1903 is also designed in the classic Indo-Saracenic style and is similar to the main administration building at the Tamil Nadu Agricultural University Campus. There are 4 or 5 large academic and clinical buildings built during the past 15 years and these are in excellent condition being of reinforced concrete construction. The remaining dozen buildings are older and in varying stages of condition. However this latter group of buildings, while structurally sound, are generally inferior in plan and are not conducive to good operation for the functions which they are required to perform. Being generally of rambling one or two storey construction they occupy valuable land which could be better utilized by demolition and replacement by one or two larger structures of more efficient functional layout. The separate hostel campus houses 3 large modern hostel buildings housing a total of 600 students. These 3 storey buildings are functional in plan and, being built of reinforced concrete, are in excellent condition. There are also 2 or 3 smaller ancillary masonry buildings (storage, dairy etc.) which are older but in very good condition.

5.05. 2 - Maintenance on all three campuses is reasonably good. Each campus has on staff a carpenter and one or two assistants who perform all small-scale carpentry repairs to buildings and furniture. Larger repair work required from time to time is performed by contract with local firms after receiving and comparing several quotations for the work required. The campus executive engineer may order repairs on his own authority upto the value of 2000 rupees. Maintenance work and repairs in excess of 2000 rupees may be only authorized by the Vice-Chancellor in consultation with the Board of Management.



Universities often allocate 1% to  $1\frac{1}{2}\%$  of their annual budget for maintenance costs. At Coimbatore the Tamil Nadu University allocated Rs. 2.5 lakhs for maintenance in 1973.

#### 5.06 - Cost Analysis of University Construction

##### 5.06. 1. Costs:

The recently accepted measure for stating construction costs is 1 square metre gross floor area (10.75 sq. ft.). Current typical construction costs (February 1974) incorporating reinforced concrete construction for various agricultural university buildings in Tamil Nadu are as follows:

<u>Accommodation Type</u>	<u>Cost range in Rs./sq.m</u>
Administration areas (Main campus)	Rs. 540
Classroom areas	Rs. 500
Laboratories	Rs. 550
Student hostels (apartment type)	Rs. 460
Student hostels (light construction cement asbestos roof)	Rs. 405
Staff residence (apartment type)	Rs. 430
Individual staff houses	Rs. 480
Cattle and swine sheds	Rs. 320
Poultry sheds	Rs. 300
Greenhouses (not glazed)	Rs. 320
Classroom buildings - Rural Extension Training Centres (Farm Science Centres)	Rs. 410
Classroom building- Farm Training Centre (light construction, cement asbestos roof).	Rs. 360
<u>Roadways</u>	
Gravel roads	Rs. 40
Asphalt paved roads	Rs. 60

##### Multi-storey construction:

In India because of absence of frost conditions, building foundations are shallow (approximately 3 ft. to 4 ft.) resulting in comparatively low foundation costs. However, costs of construction for upper storeys above the main floor are higher than that of the main floor. As all materials require to be manually carried to upper floors, increased cost of labour offsets any savings normally realised in other countries where labour saving devices (e.g. hoists) are used. For multi-storey buildings in India labour costs increase approximately 2% per storey.

5.06.2 - If the building cost index in New Delhi is assumed at 100.0, the building cost index for Bombay, Calcutta and Madras is assumed to be 105.0 due primarily to higher labour costs and less competition in the construction field.

In Coimbatore and Madurai costs of building construction are approximately 5% higher than in Madras due primarily to increased transportation costs of building materials and reduced availability of skilled labour.

5.06.3 - Building costs have been increasing steadily during the past several years with the sharpest increase (24%) occurring during the year 1973. A further 10% cost increase is expected in 1974 with continuing inflation being anticipated during the next several years. Costs of labour and building materials are reflecting an upward trend similar to that of many other countries. The current world-wide energy crises, due primarily to increased costs of petrol and fuel oil, will affect the cost of living, manufacturing and transportation in India to an extent that is difficult to predict.

If the cost of construction in India is based on a current cost index (1974) equal to 100, the building cost index has risen since 1970 as follows: (based on information obtained from C.P.W.D. Government of India).

1970	55
1971	66 (+ 20%)
1972	74 (+ 12%)
1973	91.5 (+ 24%)
1974	100 (+ 10%)

Assuming the current construction index to be 100, a further cost projection might be as follows:

1974	100
1975	108 (+ 12%)
1976	119 (+ 10%)
1977	129 (+ 8%)
1978	140 (+ 8%)
1979	151.5 (+ 8%)
1980	161 (+ 6%)



5.06.4 - Site work includes the levelling and grading of topographical regularities, removal of excess vegetation, and filling of depressions and marshes (new campus sites only). Next are the installation of roadways and bicycle/footpaths, the installation of underground water and sewer facilities and the above ground facilities such as electric lines, parking areas and water storage tanks. These costs vary according to site and each campus site must be appraised on its own topography. In addition to on-campus expenses, off-campus expenses vary with each site and may include connecting roads, electric transmission lines from distant sources, and connection of sewer lines to remote trunk mains. On existing campuses such as Coimbatore and Madurai the following approximate costs may apply:

Water Distribution and Sewage Disposal:	13% of civil works
Electrical Distribution	5% of civil works
Site work, roadways and paths etc.	5% of civil works

#### 5.06.5 - Cost Ratio Labour/Material and Local/Imported Materials

The following average ratios are given as a percentage of total building cost:

Labour	30%
Material	70%

Indirect foreign exchange component 3%.

All construction materials in India are locally manufactured and normally there is no foreign exchange component. Currently, due to the world-wide fuel shortage, India is experiencing difficulty in obtaining sufficient fuel oil to maintain production in her numerous industries. As a result, coal distribution is seriously curtailed with resultant reduction in generation of electrical power. Accordingly, India cannot meet industry requirements of steel and cement and is currently required to import approximately 20% of these products.

#### 5.07. Furniture Standards and Cost Analysis.

##### 5.07.1. Construction and Design of School Furniture

a) Furniture is mostly of hardwood, made to local design in local workshops and supplied as a sub-contract. In recent years some combination wood and metal furniture is available selected from manufacturers catalogues. Supply of furni-



ture is either by tender or on direct order depending upon the amount and types required.

b) It is the general procedure to include all built-in furniture in the construction tender. This includes shelving, cupboards, benching, railings and standard work counters etc. Usually, in Universities and Colleges, laboratory benches with special tops and specialized services, also fume hood cupboards, are purchased separately but installed by the general contractor.

#### 5.07.2. - Purchasing and Procurement:

The majority of University furniture is procured by the campus estates officer (executive engineer) by publicly advertised tender through a government agency known as Tamil Nadu Small Scale Industries.

#### 5.07.3. Adequacy of Existing Furniture:

Existing furniture is in reasonably good condition and is repaired, when required, in the campus workshop. However, furniture quantity is generally deficient. When furniture is no longer repairable, it is advertised and sold by auction periodically on the campus.

#### 5.08 - Consultant Fees

##### 5.08.1 Private Architectural Firms

The fee schedule and list of architects services are as given in Annexe A-V-1. This annexe contains excerpts from the official schedule published by the Indian Institute of Architects. Fees decrease on a sliding scale in direct inverse proportion to the increase in size of a project. Generally, for university work the fee schedule could expect to be about 5% of the total costs of civil works and site work. Included in the architects' fee is provision for engaging consultant engineers (civil, mechanical and electrical). Specialist consultants (eg. campus planners) and clerks-of-works are selected in conjunction with the consultant architect and the University Administration, but are remunerated separately by the University.

##### 5.08.2 - Supervision

Supervision is generally included in the Architects Agreement with the client and consists of periodical inspection visits to the project to ensure that the work is being executed in general accordance with the contract



documents. Constant (full time) supervision does not form part of the duties undertaken by the architect, and his periodic supervision is not intended to guarantee that the work is carried out strictly in accordance with his drawings and specifications. The architect processes shop drawings and all contractor payment accounts, advises the owner as to the progress of the work and issues the Final Certificate.

#### 5.09 - Contingencies

5.09.1 - Generally in P.W.D. and in private architectural contracts, a Contingency sum of approximately 5% of the estimated cost of construction is included as a lump sum for the owners use to cover the cost of contingencies, changes or unforeseen eventualities. Any unexpended portion of the contingency sum remaining at completion of the project is credited to the client.

#### 5.10. Equipment Standards and Cost Analysis.

##### 5.10.1 Standard Equipment Lists.

The Indian Council of Agricultural Research (ICAR) maintains standard lists of equipment for agricultural Universities and this equipment is generally available in India. If more sophisticated equipment is required, it may be secured through ICAR from abroad with purchase as described in 5.03.1 (d)

Equipment lists are prepared by the Deans of each faculty. Lists of books required in the Library are prepared by the Librarian and purchased directly under the direction of the Dean of Agriculture. Instructional Science equipment is listed by the Deans of each faculty.

5.10.2 - Educational equipment is generally procured by direct order from supply firms. Depending upon the quantity and types of equipment to be procured, sometimes these requirements are procured by tenders advertised in state or national newspapers.

##### 5.10.3 - Adequacy of Equipment

Quality and quantity of equipment varies in each faculty. Though some equipment is good, the majority of equipment is insufficient and out-dated. Electronic equipment is repaired, where possible, by a staff electronic technician and two assistants at Coimbatore. Major electro-

nic repairs are assigned to local qualified repair firms.

5.10. 4. Equipment in Staff Residences and Student Hostels.

a) Staff Residences: The University supplies this accommodation at 10% of the monthly salary of each staff member who rents University residences. This amount is deducted from the salary of staff members. No equipment or furniture is provided.

b) Student Hostels: Students pay a nominal amount for on-campus accommodation. Generally, under-graduates are placed three to a room with post-graduate students assigned to individual rooms. The University provides beds and furniture, also cooking utensils, in communal kitchens. The students provide their own mattresses, bedding and eating utensils.

c) Staff Residences and Student Hostels: These require preventative maintenance. The University is not able to provide much more than basic repairs, and infrequently.



7116  
✓ 3a

April 18, 1974

Letter No. 76

Dear Aritoshi:

Dr. Ralph Cummings, the Director of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), has cabled me that he and the Chairman of his Institute, Dr. Fred Bentley of the University of Alberta, will visit Tokyo on June 5 and 6. His cable to me does not indicate whether he has been in touch with the Japanese authorities directly about this, or whether he is simply proceeding on the basis of the informal understanding that you and I reached with Mikanagi last February 27.

You may, therefore, wish to inquire whether Mikanagi has word of Cummings's intended arrival, and whether this will be convenient.

With this letter, I am sending copies of a brochure about ICRISAT, together with the text of a recent talk by Dr. Cummings on the work of his Institute. These might be of interest to the Japanese authorities. You could keep a set for your own files if you like.

Sincerely,

Harold Graves

Enclosures

*JenW*

Mr. Aritoshi Soejima  
Director  
World Bank Tokyo Office  
Room 916, Kokusai Building  
1-1, Marunouchi 3-chome  
Chiyoda-ku  
Tokyo 100  
Japan

cc: Dr. Ralph Cummings, ICRISAT

HG:mcj

INCOMING CABLE

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APR 17 1974

COMMUNICATIONS  
SECTION

~~BMC~~  
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CJ

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Distribution:

Mr. Graves  
Agriculture & Rural Development  
Mr. Collier

April, 17 1974

INTBAFRAD

WASHINGTONDC

GRAVES INCRISAT BOARD MEETING STILL SCHEDULED MAY THIRTY THRU  
JUNE ONE STOP BENTLEY AND CUMMINGS VISITING TOKYO JUNE FIVE AND SIX  
CUMMINGS CRISAT SECUNDERABAD

93a

April 17, 1974

Dear Jerry:

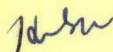
You are most kind to invite me to your Presentation Week. I would really enjoy coming, and am most sorry that the crush of business here will prevent my getting away.

The April 10 draft of your 1975 Budget and Program Proposals arrived yesterday. At a glance, it looks very complete and well done. We will indeed only use it for our own internal purposes.

Sincerely,

Harold Graves

Dr. Ulysses J. Grant  
General Director  
Centro Internacional de  
Agricultura Tropical  
Apartado Aereo 67-13  
Cali  
Colombia



HGraves:apm





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

File ICRISAT

G7

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Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 015-366

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

Mr. Harold Graves, Executive Secretary  
Consultative Group on Agril. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

April 17, 1974

Dear Harold,

Confirming my telegram sent in response to your letter of April 11, we are going ahead with our plans for the ICRISAT Board meeting on May 30 through June 1 in Hyderabad. While in Washington, Dr. Lampe suggested that we ought to have an extra day and I have taken this question up with Fred Bentley to see whether or not we should start on May 29. Fred and I expect to have an extra day or two here following the Board meeting and will be going to Tokyo on June 4 and expecting to spend the 5th and 6th in Tokyo. Fred has already initiated some contacts there through Mr. W.K. Robertson, Commercial Attache for the Canadian Embassy. I am leaving it with Fred to coordinate these contacts so that we do not get crossed up, and I believe that he is relying on Mr. Robertson to coordinate the schedules there in Tokyo. I have also written to Dr. N. Yamada whom I have known for some time, and who is, as you know, a member of the TAC, informing him of our plans. I would appreciate it very much if you would let me know the name of your representative in Tokyo and the address of the Bank's office there. At the same time, I am sure it would be helpful if you would let him know of our plans to be there on June 5 and 6, and that Mr. Robertson of the Canadian Embassy is coordinating our schedule of appointments.

I trust that you will be letting me know in due course about the plans for the Bank's architect to visit with us. USAID is currently reviewing our plans and proposed contract documents both here and in Washington to make a determination as to their contributing to the construction budget. Mr. Peterson, the architect engineer for USAID/Saigon, arrived here on Monday and is now at work on these determinations at this end. I believe that it is USAID's plan to coordinate the recommendation of their reviewers and make the determination as to eligibility for their contributing to construction funds in their Washington office.

Mr. Harold Graves  
Washington, U.S.A.

2

April 17, 1974

We hope that we may receive comments and suggestions from the Bank's reviewers in Washington quite soon so that we can incorporate these into a revision of contract documents and proceed with tendering just as soon as possible.

I greatly appreciated your very excellent hospitality during our recent visit to Washington and your very constructive assistance with reference to our problems.

Sincerely yours

  
Ralph W. Cummings  
Director

cc: Dr. C.F. Bentley

RWC:jg

SECTION  
COMMUNICATIONS  
APR 17 1974

Mr. Harold Graves  
Washington, U.S.A.

April 17, 1974

2

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Ralph W. Cummings  
Director

cc: Dr. C.F. Bentley

RWC:jg

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INTERNATIONAL CROPS RESEARCH INSTITUTE  
FOR THE SEMI-ARID TROPICS  
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Mr. Harold Graves, Executive Secretary  
Consultative Group on International  
Agricultural Research  
1818 H. Street, N.W.  
Washington, D.C. 20433

April 17, 1974

Dear Harold,

I have taken note of your letter and your report on your discussions with the Asian Development Bank. I have also been giving thought to the question of following up on our contacts with the Japanese Government. I wish to report that Fred Bentley and I are planning to make a trip to Japan immediately following our next Governing Board meeting, and are setting up appointments for discussion with officials of the Japanese Government on June 5 and 6. I am also writing to Mr. Krishna Moorthi and Dr. Hsieh of the Asian Development Bank hopefully looking toward discussions with them in Manila on June 7.

In the meantime, we are busy developing more specific plans for our cooperative outreach activities in Africa and in this connection would like to initiate some discussions with the appropriate officials of the European community in view of their interest and participation in development programs in West Africa. I would appreciate it very much if you could advise me as to who the appropriate people in the European community (FED OR FAC) in Brussels might be. I note that the European community was not represented in the last meeting of the Consultative Group or International Centers Week, and the contact listed in 1972 meetings may now be out of date.

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

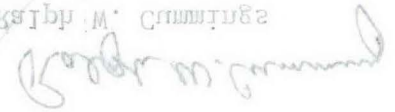
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COMMUNICATIONS SECTION

Director  
K. M. Cummings



Sincerely yours

out of date.  
Centers week, and the contact listed in 1973 meetings may now be  
in the 1974 meeting of the Consultative Group on International  
Trade. I note that the European Community was not represented  
private people in the European Community (EC) in Brussels  
representative of each group of countries and to who the Euro-  
and participation in development programs in many areas. I would  
private officials of the European Community in view of their interest  
connection would like to initiate some discussions with the Euro-  
plans for our cooperative outreach activities in Africa and in Asia  
in the meantime, we are really developing more specific

with them in Manila on June 1.  
the Asian Development Bank reportedly looking toward discussions  
and I am also meeting to Mr. Krishna Mohan and Dr. Hester of  
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Dear Harold,

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

APR 27 1974

Telex : ICRISAT 012-300  
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Phone : 7301, 7328

Hyderabad-200016 "A" B" 1974  
1-11-74, Begunber  
CITY OFFICE :

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





**COPY**

57  
INTERNATIONAL CROPS RESEARCH INSTITUTE  
FOR THE SEMI-ARID TROPICS

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

April 16, 1974

Mr. C.S. Krishna Moorthi  
Vice President  
Asian Development Bank  
Commercial Center  
P.O. Box 126  
Makati, Rizal D-708  
The Philippines

Dear Mr. Krishna Moorthi,

Mr. Harold Graves, Secretary of the Consultative Group, has informed me about the discussions he had with you and your associates on February 25 at which time I understand he discussed the work of the International Agricultural Research Institutes, the role of the Consultative Group for international agricultural research, and was exploring the possible interest of the Asian Development Bank in support of some of the Institutes' work. I expect to be making a trip into East Asia in early June and would like very much to come to Manila on Friday, June 7 to meet with you and your associates to discuss with you our program at ICRISAT, and explore in a preliminary way at least the possible areas in which we may find joint interests. You will recall that I visited the Bank in late June of 1972 just after I joined as Director of IRRI to discuss with you, Mr. Watanabe and others the problem of promulgating the Constitution and Charter for ICRISAT. After a very short tenure at IRRI, I was transferred here to take over the Directorship of ICRISAT. I believe that we have made quite substantial progress in the development of the Institute and its program, and I would very much welcome the opportunity of meeting with you and your associates to discuss the Institute and its program further.

I would appreciate it if you would let me know if Friday, June 7 would be a convenient time for me to visit with you, and if so, I would appreciate your indication of the approximate time I might call at your office.

With very best regards, I am,

Sincerely yours

*Rwe*

Ralph W. Cummings  
Director

cc: Dr. S.C. Hsieh  
Mr. Harold Graves ✓  
Dr. C.P. Bentley

RWC:jg





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

~~BAC~~  
HG  
CJ  
67

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April 16, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Agril. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

I am responding to your memorandum of March 7, 1974 on the subject of the "World Fertilizer Situation" in which you attached a copy of the Resolution on this subject adopted by TAC at its meeting in February and called for comments from the International Agricultural Research Institutes. I am enclosing a statement on "Strategy of Research for a Situation of Fertilizer Shortage" which was prepared by Dr. J.S. Kanwar, our Associate Director, in consultation with other members of our staff.

Very truly yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

Encl:

cc: Dr. N.C. Brady  
Dr. H.R. Albrecht  
Dr. R.L. Sawyer  
Dr. U.J. Grant  
Dr. R.F. Chandler  
Dr. H. Hanson

RWC:jg

*Handwritten notes:*  
Cummings  
Hanson  
Sawyer

BAC  
H  
C

Handwritten initials/signature

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



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April 16, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Agril. Research  
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Washington, D.C. 20433  
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Very truly yours

*Ralph W. Cummings*  
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Encl:

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- Dr. U.J. Grant
- Dr. R.F. Chandler
- Dr. H. Hanson

*Crawford*  
*Dennell*  
*Yudelman*

RWC:jg



STRATEGY OF RESEARCH FOR A SITUATION  
OF FERTILISER SHORTAGE

J. S. Kanwar  
Associate Director  
International Crops Research Institute for the Semi-Arid Tropics

---

The only hope of humanity to feed itself and keep the pace of food production with the growing population lies in the use of new technology in agriculture which is based on high yielding, highly fertiliser responsive varieties and greater use of fertiliser. The energy crisis and sky rocketing of fuel prices have contributed to creating a great fertiliser shortage. Increased demands on both developed and developing countries following a period during which there has been a very limited expansion of production facilities has accentuated the competition for the limited supplies and has further accentuated a sharp price rise. This is causing a great concern throughout the world particularly in the developing countries. Its indirect effect on fertiliser production, transport, marketing and distribution is disastrous for agriculture. There is a danger that shortage of fertiliser in developing countries will not only inhibit future expansion but will push agricultural output back towards traditionally low levels of productivity.

The questions being raised are (i) should not the International Agricultural Research Institutes reorient their thinking regarding a technology suited for developing countries; (ii) how far will it be wise to breed varieties which require more and more fertiliser and pesticide inputs; (iii) should we not consider developing varieties which are capable of giving reasonably good yields with moderate to low fertiliser inputs.



The crisis has also revived the old controversy - organic manures-vs-fertilisers. Can we achieve the production targets by laying greater emphasis on the use of organic manures, green manures and other nitrogen fixation techniques?

The concern of TAC regarding the fertiliser shortage and its likely impact on agricultural production is understandable. The matter was discussed at the meeting of the Directors of the International Agricultural Research Institutes. It was felt that the fertiliser shortage, particularly, the shortage of nitrogen is really very alarming. Even according to TVA specialists' estimates for another five years the nitrogen supply position is not likely to improve sufficiently to meet the growing needs and demands. However, if all the projected plants come in full production the situation will improve in five years time. So far as phosphatic fertilisers are concerned, it is expected that in two years the situation may improve.

The question arises as to what should be done in the present situation. It seems that we have to evolve a strategy for short term objectives and long term goals. This goes without saying that there is no substitute for fertilisers. All other measures are only complementary. If the world projections of food production are to be met, the fertilisers cannot be dispensed with. Secondly, there is no alternative to breeding varieties which give greater responses per unit nutrient as even at moderate to low doses of fertiliser only such varieties will be more profitable. Thus no change in plant breeding policy as such is necessary though in evaluating



the variety responses to low and medium levels of fertiliser application also need to be considered. However, for meeting the present situation, certain considerations need to be given to new researches.

1) Nitrogen fixation through symbiosis:

Legumes are well recognised sources for the fixation of atmospheric nitrogen by symbiosis through the nodules. Researches on the efficient rhizobial strains for nitrogen fixation and improving the soil environment for the greater efficiency of legume bacteria is necessary. Fortunately, many of the International Agricultural Research Institutes such as ICRISAT, IITA and CIAT have already included the grain legume crops in their programs of research. Plans on nitrogen fixation by legumes are at different stages of implementation in these institutes. Even IRRI which is primarily concerned with rice is paying great attention to nitrogen fixation in soils through algae. Fundamental researches have been taken up in some institutions on transferring the ability of nitrogen fixation from legumes to cereals. Some members of the gramineae family have been found to fix certain amount of nitrogen. It is felt that basic research in this field may pay rich dividends in the distant future. However, for the short term objectives the major emphasis will continue to be laid on the efficient rhizobial cultures for nitrogen fixation. In crops like soybean the highly beneficial effect of selected rhizobial cultures is very spectacular but in pulses like pigeon pea, chickpea, cowpea, mungbean, etc., no such spectacular effect has yet been observed. It seems that the native bacteria in the rhizosphere of these legume crops may have antagonistic effect on the introduced cultures of bacteria. Anyhow searches for the most efficient strains of rhizobial



: 4 :

cultures and most favourable soil environments for the efficiency of these cultures are to be intensified. It may, however, be mentioned that it is very unlikely that in a short time any breakthrough in this field may be possible. Even the non availability of the competent soil microbiologists is a factor against which all the International Agricultural Research Institutes are struggling.

2) Improving the efficiency of fertiliser use:

Studies in India as well as in other countries clearly indicate that greater returns from fertiliser use can be effected through more efficient management of fertiliser, soil and crop. Kanwar and associates (1973) from an analysis of few thousand experiments on cultivated fields in India on wheat, rice, maize, sorghum and millet have shown that even with HYV with N alone, a large number of farmers lose on fertiliser application. On the other hand, when the N is balanced with P and K, all these losses are converted into profits. Secondly, even a lower dose of balanced fertiliser products greater increase in yield than an unbalanced high dose of nitrogen. Thus in this critical period, when there is a shortage of nitrogenous fertilisers there is a greater need for balanced use of fertiliser.

The method of fertiliser application and time of application are also very important for economising fertiliser dose and increasing its efficiency. There is overwhelming evidence for the greater efficiency of nitrogen by splitting the dose than using one dose. Likewise through placement of fertiliser at a suitable depth, efficiency can be increased considerably.



Tailoring the fertiliser to the nutrient status of the soil and the expected yield level of the crop results in greater efficiency and economy of the fertilisers.

In this period of great fertiliser shortage, it is imperative that all the factors which can improve efficiency of fertilisers need to be considered. For example for acid soils, without liming higher efficiency of fertilisers cannot be obtained. In alkali soils, application of gypsum for obtaining greater efficiency of fertiliser is necessary.

The basic deficiency of some of the micronutrients like zinc has become a critical factor in the economy of fertiliser. In India in many crops and soils without an application of a small dose of say 20-40 kg. zinc sulphate per hectare, even good responses to NPK are not obtained. In our experiments at ICRISAT it has been observed that zinc and phosphate are limiting factors which govern the efficiency of nitrogen applied to sorghum and millet on its headquarters farm.

For rainfed farming conditions particularly for crops like sorghum, millet, chickpea and pigeon pea, the high fertiliser prices make the use of fertiliser in heavy doses less favourable as the price of these grain crops does not increase in proportion to fertiliser prices and also other commodities. Thus we are faced with a dilemma. On the one hand, it is evident that because of low soil fertility, the yields of these crops are low and the yields increase with the use of balanced fertiliser. On the other hand, it is the comparatively lower dose of fertiliser that gives significant profits.



Thus a technology is needed which is based not on very heavy doses of fertilisers but on low to medium doses of fertilisers. Moreover, the risks are much greater under rainfed conditions. Thus there is a greater need for more rational fertiliser management than under more favourable moisture conditions. This does not imply that we need varieties which are non responsive to fertilisers. Rather, a germplasm is needed which gives greater responses per unit nutrient even at low to moderate levels.

3) Tailoring fertiliser application to the soil test:

Soil testing provides an inventory of the nutrient status of the soil and one could economise fertilisers and improve their efficiency by tailoring the fertiliser dose to the nutrient status of soil as judged by soil tests. Hundred of examples could be cited from Indian experience as to how the efficiency of fertiliser rises by relating the fertiliser dose to actual soil test value.

This aspect needs greater attention at all the International Agricultural Research Institutes so that they could develop some guidelines for relating the fertiliser recommendation to the soil tests.

In the ICRISAT, we will pay due attention to this aspect, as we realise that the crops of the semi-arid tropics are not only low value crops but they also pose greater risks for the farmers because of the uncertainty of the yield level due to unreliable weather.



4) Research on methods of using low grade fertilisers and low water solubility grade phosphate:

Because of world shortage of fertilisers, it is very essential that all nations should develop techniques for utilising even low grade fertilisers like basic slag, rock phosphate, etc. The citrate soluble phosphates instead of water soluble phosphates may be utilised more efficiently by selecting the proper soil and crop.

Recent studies at CIAT have shown that Endogone, a mycorrhizol fungus is very effective in increasing the availability of even fixed phosphates from the soil. Researches on such microbial techniques for enhancing the availability of phosphates from the soil need strengthening. It is hoped that all the international institutes will pay greater attention to such studies in future.

5) Development of most efficient farming system for reducing the need for nitrogenous fertilisers:

Introduction of grain legumes in the crop rotation for intercropping, companion cropping and multiple cropping systems will result in economy of nitrogen to a certain extent. How far these systems can lead to saving in use of nitrogenous fertiliser remains to be studied. Thus in the farming system research this aspect needs study. Its place in the economy of nitrogen under rainfed farming particularly needs much greater emphasis. We hope that as soon as our laboratory facilities are created, relevant studies on this aspect will receive due attention.



6) Mixed Farming including animal production:

In the semi-arid tracts of the world, mixed farming including crop and animal production is very important. Animals became particularly useful for recycling the nitrogen from agricultural by-products. In the situation of fertiliser shortage due emphasis has to be laid on this aspect.

It may be concluded that though the International Agricultural Research Institutes are fully conscious of the problem of fertiliser shortages and the type of researches which are needed for meeting the situation, all these measures can lead to meeting the situation only to a limited extent. The major plank in the world's strategy for agricultural production still lies in the greater production of fertilisers and its proper distribution and efficient utilisation. The world community needs to think in terms of creating fertiliser buffer stocks nearer to the centres of production and use. Unless international action is taken, the shortage of fertiliser is likely to affect the food production, particularly, in the developing countries.



G.3a

April 15, 1974

Dear Ralph:

Here are one or two points about funds for ICRISAT. When we had our meeting in Washington on April 4 and 5, both Joel Bernstein of USAID and Bill Mashler of UNDP indicated a willingness to raise the contributions of their respective agencies to ICRISAT. In the case of USAID, the contemplated increase was on the order of \$1 million; and in the case of UNDP the possible increase was guessed at \$500,000. Both these increases, however, were taken into account in the estimate of funds available (namely, \$33 million) to ICRISAT in 1974-1977, so that they would not affect the ceiling figure adopted on April 5.

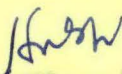
I wrote to both Bernstein and Mashler a week ago, reminding them of their thoughts about increased contributions, and I understand that Mashler is writing you about this today.

Colin McClung had another idea: he recalled that the Kresge Foundation -- which has been invited, but is not a member of the Consultative Group -- has contributed funds for the construction of libraries at two of the international centers. Consideration of the grants was set in motion by Sterling Wortman, and I hope to talk with him in the next day or two to see what might be an appropriate procedure for getting such a grant started for ICRISAT. I will be in touch with you again about this as soon as I am able to make any suggestions.

Sincerely,

Harold Graves

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India



HGraves:apm

G20  
✓cc: G30

Mr. Yudelman

April 12, 1974

Harold Graves *HG*

Desk Reviews of International Agricultural  
Research Centers (CIP and ICRISAT)

We now have the 1975 program and budget proposals of CIP and ICRISAT. These are two of the three centers for which desk reviews of the scientific programs are to be done within the Agriculture and Rural Development Department.

I attach copies of the program and budget documents so that work can begin on these desk reviews. It would be helpful if drafts could be completed by May 6. Thereafter, it will remain to integrate these reviews with the budget reviews, circulate the integrated reviews to the centers and receive center comment (for which a month is needed), do any rewriting necessary, and circulate to the Consultative Group and TAC not later than July 5.

I am anxious that the review papers be kept as brief as possible -- as little as two pages on the scientific side. What we want is a commentary on the facts set forth in documents, not an exposition of the facts themselves.

Jim Evans's excellent review of IITA (also attached) cannot be taken as a model in this regard. It was written before the program and budget paper was available, and therefore had to include a good deal of exposition. It will be considerably reduced before circulation to the Consultative Group.

Attachments

cc: Mr. Darrell

HGraves:aps



# DIAKONISCHE ARBEITSGEMEINSCHAFT EVANGELISCHER KIRCHEN IN DEUTSCHLAND

Bund Evangelisch-Freikirchlicher Gemeinden in Deutschland · Bund Freier Evang. Gemeinden in Deutschland · Das Diakonische Werk der EKD  
Die Heilsarmee in Deutschland · Europäisch-Festländische Brüder-Unität Herrnhuter Brüdergemeine · Selbständige Evangelisch-Lutherische Kirche  
Katholisches Bistum der Altkatholiken in Deutschland · Evangelisch-methodistische Kirche in Deutschland · Vereinigung der Deutschen Mennonitengemeinden

Schäftsführung: Das Diakonische Werk der Evangelischen Kirche in Deutschland, Hauptgeschäftsstelle Stuttgart

Brot für die Welt · 7 Stuttgart 1 · Postfach 476

International Bank for  
Reconstruction and Development,  
Africa Office,  
Mr. Harold Graves,  
1818 H. Street, N.W.

Washington, D.C. 20433

U.S.A.

## BROT FÜR DIE WELT

7 STUTTGART 1

STAFFLENBERGSTRASSE 76

TELEFON \*2 05 11 oder 20 51-

Telegramme: Diakonie Stuttgart

April 11, 1974  
II-Dr.Kr./hg

Besuche bitte vorher vereinbaren  
Visits should be arranged beforehand  
Prière d'annoncer des visites  
Visitas únicamente com acôrdo prévio

Dear Mr. Graves,

I have received from you the very important address of Mr. McNamara to the Board of Governors of the Worldbank, held in Nairobi on September 24, 1973. My colleagues and I think it is one of the most important speeches on development aid that I have heard of.

On page 22, last but one paragraph the President mentions a new research institute for the semi-arid tropics. Since we are very much involved in the problems of the Sahelian Zone and other drought areas in other parts of the world I would like to know where this new institute is situated. Do you have any background material on it?

We welcome any information about this institute.

With best personal regards,

Yours sincerely,

*Dieter Krause*  
- Dr. Dieter Krause  
Africa Desk II

SECTION  
COMMUNICATIONS  
1818 H. STREET N.W. 20433

RECEIVED

*Sent Apr 18*  
*Brochure -*  
*This is TC RISAT*  
*speech of Dr. Cummings*  
*Expectations for future develop-*  
*ments in Southern Africa*  
*& Lesotho*  
*Feb 19/74*

Konten: Girokasse Stuttgart Nr. 2 001 351 (BLZ 600 501 01) · Postscheckamt Stuttgart Nr. 344 70-701 (BLZ 600 100 70)

Spenden „Brot für die Welt“: Girokasse Stuttgart Nr. 2 417 000 (BLZ 600 501 01) · Postscheckamt Stuttgart Nr. 8001-704 (BLZ 600 100 70)

Spenden „Brüderlich teilen — gemeinsam handeln“: Girokasse Stuttgart Nr. 2 011 224 (BLZ 600 501 01) · Postscheckamt Stuttgart Nr. 11 22-706 (BLZ 600 100 70)

Katholisches Bistum der Altkatholiken in Deutschland · Evangelisch-methodistische Kirche in Deutschland · Vereinigung der Deutschen Mennonitengemeinden  
Die Heilsarmee in Deutschland · Europäisch-Perländische Brüder-Unitar Herrnhuter Brüdergemeine · Selbständige Evangelisch-Lutherische Kirche  
Bund Evangelisch-Freikirchlicher Gemeinden in Deutschland · Bund Freier Evang. Gemeinden in Deutschland · Das Diakonische Werk der EKD

Schäftsführung: Das Diakonische Werk der Evangelischen Kirche in Deutschland, Hauptgeschäftsstelle Stuttgart

**BROT FÜR DIE WELT**

7 STUTTGART I

STAPFENBERGSTRASSE 26

TELEFON \*705 11 oder 2051-

Telefax: Diakonie Stuttgart

Tele: 07-13 327 464-4 April 11, 1974

II-Dr.Kr.\ng

Visitas únicamente con acórido previo  
Faxes d'annoncer des visites  
Visits should be arranged beforehand  
Besuche bitte vorher vereinbaren

Brot für die Welt · 7 Stuttgart I · Postfach 476

International Bank for  
Reconstruction and Development,  
Africa Office,  
Mr. Harold Graves,  
1818 H. Street, N.W.

Washington, D.C. 20433

U.S.A.

Dear Mr. Graves,

I have received from you the very important address of Mr. McNamara to the Board of Governors of the World Bank, held in Nairobi on September 24, 1973. My colleagues and I think it is one of the most important speeches on development aid that I have heard of.

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We welcome any information about this institute.

With best personal regards,

Yours sincerely,

*Dr. Dieter Kluge*  
- Dr. Dieter Kluge -  
Africa Desk II

SECTION  
COMMUNICATIONS

1974 APR 16 AM 9:22

RECEIVED

*Handwritten notes:*  
Brot für die Welt  
Africa Desk II  
April 11, 1974  
Kluge



D16  
✓ cc: G. Bee

April 11, 1974

Dear Ralph:

The head of the Bank's Tokyo Office has been here this week, and the word will go back from him to the Japanese authorities that you and Fred Bentley are prepared to visit Japan around the time of your next Governing Board meeting.

Another visit scheduled for around that time, as you will remember, is the visit of a World Bank architect to Hyderabad, as first suggested by Dr. Lampa, for discussions in advance of ICRISAT's awards on construction contracts.

These two circumstances lead me to ask whether it is still intended that the ICRISAT Governing Board should meet on the days of May 30-June 1, or whether, in view of the recent con-fabulation in Washington, the date will be changed.

It would be helpful to have a reply to this question by telegram.

Sincerely,

Harold Graves

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

*HW*  
HGraves:ppm

G3a

April 10, 1974

Dear Art:

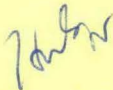
I talked yesterday with Kin Maung Thint about what he might be able to do on ICRISAT's behalf in the next week or two. He is, in fact, getting together some material on construction standards observed by various bodies in India, and will send this to you as soon as possible. He is, regretfully, not in a position, however, to offer you any detailed suggestions or commentary.

I'm writing separately to Ralph Cummings, asking whether he continues to expect that his Governing Board will meet at the end of May -- in which case we would expect to send an architect to Hyderabad shortly in advance of that time -- or whether that date is now going to be changed.

Sincerely,

Harold Graves

Dr. Arthur Leach  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India



HGraves:apm



43a

April 10, 1974

Dear Ralph:

Here is a copy of the minute adopted by ICRISAT donors of their meeting of April 4-5. As you will see from the list of participants, Dr. Lampe was present, and he and Ralph Cummings, I am sure, adequately represented the views of ICRISAT. The ODA statement was made available at the outset of the meeting.

The figure of \$33 million mentioned in paragraph 2 as being available for ICRISAT in 1974-1977 is, in fact, about \$1 million over what seems to me to be definitely in sight. With Joel Bernstein's encouragement, it includes an increase of \$840,000 in what previously had been estimated for the United States, and also, on the basis of encouragement by William Mashler, counts in an extra \$500,000 over what previously had been indicated by UNDP. The statement as you will see, admonishes the Bank to get back to the question of an under-writing to even out ICRISAT's cash flow (on which the attached statement by Dick Demuth was circulated to the meeting).

The Secretariat's private estimates put the U. K. contributions to ICRISAT from 1974 through 1977 at a total, in a U. S. dollar equivalent, of \$1,500,000. This is an annual average of \$375,000, which is about the present U. K. level, and makes no allowance for rising prices. I hope that, in the event, this figure will prove to be an under-estimate. I expect to be visiting donors in May/June, and hope we can talk about this figure, among others on the U. K. schedule, at that time.

Sincerely,

Harold Graves

Mr. A. R. Melville  
Chief Natural Resources Adviser  
Foreign and Commonwealth Office  
Overseas Development Administration  
Eland House  
Stag Place  
London SW1E 5DH  
England

HGraves:apm

Enclosures

*Handwritten signature*

43a

Mr. Soejima

April 10, 1974

Harold Graves

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

Dr. Ralph Cummings, the Director of ICRISAT, and Dr. Fred Bentley, the Chairman of the ICRISAT Governing Board, are prepared to visit Tokyo to discuss the program and progress of their Institute with the Japanese authorities. As we discussed with Mr. Mikanagi in Tokyo, the visit would take place around the time of the Institute's next Board meeting.

That meeting has been scheduled for May 30-June 1; but there now seems to be a possibility that it will be changed. Let me suggest that I confirm the date with Dr. Cummings and, after that has been done, I ask you to start making specific arrangements with Mr. Mikanagi. I will write Dr. Cummings about this today.

There is a possibility that the date may be postponed to a date as late as the end of June. If so, you might wish to be considering whether, in view of the Japanese planning and budget cycle, it would be desirable for Dr. Cummings and Dr. Bentley to adhere to the earlier schedule.

cc: Mr. Baum

*HG*

HGraves:apm



✓ 43a  
cc: D3.

April 9, 1974

Dear Bill:

Your presence at the ICRISAT meeting was greatly appreciated. Nothing further of substance happened in the meeting on the second day: we approved a brief statement recording the sense of the meeting, which I will send you tomorrow.

A number of donors did meet informally on the morning of the second day and, among other things, talked about the financial outlook for ICRISAT during the period of 1974-1977. It is evident that operating costs during this period are going to be higher than originally estimated, and on this point the statement of the sense of the meeting says that "donors recognize that CGIAR members should make every effort to adjust their contributions to the CGIAR program to take account of inflation." In our informal meeting on Friday morning, it was indicated that some donors could be expected to raise their contributions above the amounts which the Secretariat of the Consultative Group had estimated. These increases are on the order of \$1.1 million equivalent, and represent an addition of about 13 per cent to the contributions of the donors involved.

At an appropriate time, I hope that UNDP can give consideration to the possibility of increasing its disbursements to ICRISAT in the years 1975-1977 inclusive. It would be helpful if the representatives of UNDP were in a position to make a statement on this matter at the time of International Centers Week this summer.

Sincerely,

Harold Graves

Mr. William T. Mashler  
Director  
Division for Global and  
Inter-regional Projects  
United Nations Development Programme  
866 United Nations Plaza (Room 3512)  
New York  
New York 10017

*HG*  
HGraves:apm

43a

Mr. Yudelman

April 9, 1974

Harold Graves

ICRISAT

You may remember that during the meeting of ICRISAT donors, Dr. Lampe, speaking as a member of the ICRISAT Governing Board, suggested that it would be very helpful if the Consultative Group could arrange to send a Bank architect to the Institute a week or more ahead of the next meeting of the ICRISAT Governing Board (now scheduled for May 29) to study the construction bids and bid evaluations and give advice on this subject to the management and Governing Board of ICRISAT. Dr. Lampe's suggestion was supported by Dr. Cummings, the Director of ICRISAT.

Mr. Thint and Mr. Lithgow have subsequently discussed this idea, and Mr. Thint has suggested that it would be most helpful if Mr. Lithgow could accompany the architect on this occasion.

You reacted favorably to Dr. Lampe's suggestion, and I now ask whether we should begin to follow it up.

In view of the request of ICRISAT donors that consideration be given to changes in the Institute's capital plan, the Board date may be set later than May. This point would need to be clarified if we are to follow up.



cc: Mr. Baum

HGraves:apa



*yellow* 43a

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

1. The donors and other parties interested in the establishment of ICRISAT<sup>1/</sup> 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.

ICRISAT Donors Meeting

April 4-5, 1974

List of Participants

Chairman

Mr. Montague Yudelman, IBRD

ICRISAT

Dr. Ralph W. Cummings, Director  
Dr. Arthur Leach

Canada

Mr. Ian Robertson  
Mr. George Krivicky

Ford Foundation

Dr. F. F. Hill  
Dr. Dale Hathaway

Germany

Dr. Klaus Lampe

IBRD

Mr. George Darnell  
Mr. W. W. Lewis

International Development Research Centre

Mr. W. Douglas Daniels

Norway

Mr. Per Oelberg

Rockefeller Foundation

Dr. Colin McClung

Sweden

Mr. Magnus Nordbäck

UNDP

Mr. William T. Mashler

United States

Dr. Joel Bernstein  
Dr. Guy Baird

Secretariat

Mr. Harold Graves, Secretary  
Mrs. Audrey Mitchell  
Miss Caryl Jones



✓G3a  
cc: 022

April 8, 1974

Dear Joel:

I am writing to William Mashler today to ask him to set in motion the procedure that is necessary to make an addition of \$500,000 to the UNDP grant for ICRISAT.

In the talk which took place among several donors last Friday morning, you mentioned that an adjustment in the figures for USAID grants to ICRISAT in the years 1975-77 also would be appropriate. You indicated that the adjustment could be made under the usual formula of setting USAID contributions at a figure up to 25% of funds provided for a given institute within a given year. You pointed out, in a table which I had prepared showing the lower range of contributions to be expected for ICRISAT, that the USAID figures for 1975-77 had not been set at the full 25%, and that, in the event, the figures might be adjusted upward.

In addition, it seems probable that Norway will agree to larger annual contributions than are shown in the lower-range table. These increases may amount to \$150,000 in 1976 and \$150,000 in 1977.

When all these factors are taken into account, a new set of estimates for the USAID contribution to ICRISAT for 1975-77 can be calculated. For my own purposes, I am using the following figures: 1975, \$2.02 million; 1976, \$2.11 million; and 1977, \$2.01 million.

Sincerely,

Harold Graves

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

*HGraves*  
HGraves:apm

43a

CABLEQ

ZCZC 248423 RCO56 PDC0080 RWF2381 KHY218 BDS665/9

URWT NL INBX 027

SECUNDERABAD 27 9 1450

Distribution: Mr. Graves  
Agric. and Naval Dev.

LT

INTBAFRAD

WASHINGTONDCUSA

ATTENTION GRAVES APRIL FOUR AND FIVE SATISFACTORY OUR  
SIDE WASHINGTON MEETINGS STOP WILL APPRECIATE YOUR FURTHER SUGG-  
ESTIONS ABOUT PRESENTATIONS REGARDS

CUNNING (CRISAT) SECUNDERABAD

COL LT APRIL FOUR AND FIVE IRPT FOUR





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

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

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

April 3, 1974

Mr. Harold Graves  
IBRD  
Washington

Dear Harold:

I am attaching a table we have prepared which may be of some use for our discussions. I really don't think it adds much more light on the subject, since we are only guessing at what actual costs may turn out to be under various assumptions. We can get this much more closely after we call for tenders. I would be disposed to proceed with the discussions using the figures you have already distributed as a point of reference.

I am leaving here one set of the proposed contract conditions and specifications. I have a couple hundred pounds of blueprints I'll bring over later.

I'll see you and Mr. Baum this afternoon.

Regards.

Ralph W. Cummings



ICRISAT BUILDING PROGRAM

March 27, 1974

(EXTRACTED FROM ARCHITECT'S DESIGN DEVELOPMENT REPORT - JULY 1973)

No.	Type of Facility	GROSS AREA OF CONSTRUCTION			UNIT COST			ESTIMATED COST					Remarks				
		July 1973	Feb. 1974	March 1974	July 1973	February 1974		Architect's July 1973	February 1974	February 1974		March 1974					
		3	4	5	6	+25%	+30%	9	10	+25%	+30%	+25%		+30%	13	14	15
		(sq.ft.)	(sq.ft.)	(sq.ft.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	
<b>A. INSTITUTIONAL BUILDINGS:</b>																	
200	Administration	24,570		24,300	88.00	110.00	114.40	2,150,000		2,687,500	2,795,000	2,673,000	2,779,920				(See Architect's Remarks March 28, 1974)
203	Library	13,850		16,520	77.00	96.25	100.10	1,060,000		1,325,000	1,378,000	1,590,050	1,653,652				Includes 1560 sq.ft. future stack area & 5840 sq.ft. stilt area.
202	Auditorium	6,410		7,550	106.00	132.50	137.80	680,000		850,000	884,000	1,000,375	1,040,390				
306-X 307 X	Training Office	2,700		3,067	85.00	106.25	110.50	230,000		287,500	299,000	325,869	338,904				
300	Laboratory I	22,260		20,400	128.00	160.00	166.40	2,850,000		3,562,500	3,705,000	3,264,000	3,394,560				
301	Laboratory II	22,260		20,400	128.00	160.00	166.40	2,850,000		3,562,500	3,705,000	3,264,000	3,394,560				
302	Laboratory III	22,260		20,227	104.00	130.00	135.20	2,315,000		2,893,750	3,009,500	2,629,510	2,734,690				
312	Plant Quarantine			(5,730)				(500,000) Deleted									Omitted from Phases (I&II) Can be accommodated in buildings constructed for temporary operational headquarters with limited modifications. Covered work area increased in size.
408	Crop Work Area	29,860	31,583	36,767	48.00	60.00	62.40	1,430,000	1,513,000	1,891,250	1,966,900	2,206,020	2,294,261				Covered work area increased in size.
401	Farm Machinery, Maintenance & Stores	48,640	52,640	56,296	52.00	65.00	67.60	2,540,000	2,749,000	3,302,000	3,573,700	3,659,240	3,805,610				Shop increased in size.
400	Mechanical, Electrical Services	9,470		9,176	64.00	80.00	83.20	610,000		762,500	793,000	734,080	763,443				
309	Radio Isotope Lab. Plant -propagation, soil storage.	21,150		16,872	73.00	91.25	94.90	1,540,000		1,925,000	2,002,000	1,539,570	1,601,153				
206-X 207-X 208 X	Chemical Store & Warehouse	10,570		12,847	46.00	57.00	59.80	490,000		612,500	637,000	732,279	768,251				
205	Canteen	9,620		9,620	77.00	96.25	100.10	740,000		925,000	962,000	925,925	962,962				
209	Laundry	2,080		2,326	86.00	107.50	111.80	180,000		225,000	234,000	250,045	260,047				

(Cont'd)



No.	Type of Facility	GROSS AREA OF CONSTRUCTION			UNIT COST			ESTIMATED COST						Remarks		
		July 1973	Feb. 1974	March 1974	July 1973	February 1974		Architect's July 1973	February 1974	February 1974		March 1974				
		3	4	5	6	7	8	9	10	+25%	+30%	+25%	+30%		13	14
		(sq.ft.)	(sq.ft.)	(sq.ft.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
<b>A. Institutional Buildings (Cont'd):</b>																
310-X	Greenhouses	24,000		24,000	54.00	67.50	70.20	1,314,000		1,642,500	1,708,200	1,620,000	1,684,800			
311 X																
313	Main entrance Lab.			(1)												
314	Telephone Office, Workers Lounge			(2)												
500-X	Dormitories	63,600		79,237	90.00	112.50	117.00	5,680,000		7,100,000	7,384,000	8,914,163	9,270,729			Includes 12,900 sq.ft. of stilt area.
501 X																
502	Flatlets	14,780		20,014	97.00	121.25	126.10	1,430,000		1,787,500	1,859,000	2,426,698	2,523,765			Includes 3,700 sq.ft. of stilt area.
700	Guest House/Recreation Centre.	17,500	15,500	16,323	86.00	107.50	111.80	1,500,000	1,329,000	1,661,250	1,727,700	1,754,723	1,824,911			Includes 12 guest rooms 2 suits - reduced in size.
3	Playing Fields															
204	Dining Centre	18,580		19,850	74.00	92.50	96.20	1,375,000		1,718,750	1,787,500	1,836,125	1,909,570			
	<u>Sub-Total:</u>							30,964,000	31,085,000	38,856,250	40,410,500	41,345,672	43,006,178			
<b>B. HOUSING:</b>																
600	Director's Residence	5,950	4,500	(4,500)	89.00	111.25	115.70	560,000	400,000	500,000	520,000	500,625	520,650			Being reduced in size.
601-X	International staff housing - 20 units	59,620	45,000	(45,000)	105.00	131.25	136.50	6,240,000	4,710,000	5,887,500	6,123,000	5,906,250	6,142,500			Reduced in size.
603 X	(4,3 & 2 bedrooms)															
610-X	Essential Support Staff housing - 36 units	56,100		(56,100)	108.00	135.00	140.40	5,950,000	3,366,000	4,207,500	4,375,800	7,573,500	7,876,440			Specs. (and unit costs Reduced.
612 X	(3 and 2 bedrooms)															
620-X	Other Support Staff housing - 32 units	17,600		(17,600)	68.00	85.00	88.40	1,200,000	704,000	880,000	915,200	1,496,000	1,555,840			Specs. (and unit costs Reduced.
621 X																
	<u>Sub-Total:</u>							13,950,000	9,180,000	11,475,000	11,934,000	15,476,375	16,095,430			

(Cont'd)

(1) See Building 300/1

(2) See Building 308



E S T I M A T E D C O S T

No.	Type of Facility	GROSS AREA OF CONSTRUCTION			UNIT COST			Architect's July 1973	ESTIMATED COST				Remarks	
		July 1973	Feb. 1974	March 1974	July 1973	February 1974	February 1974 +25%		February 1974 +30%	March 1974 +25%	March 1974 +30%			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		(sq.ft.)	(sq.ft.)	(sq.ft.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	
<b>C. AIR-CONDITIONING INSTALLATION:</b>														
	Air-Conditioned Space	225,000		185,000								6,475,000	6,734,000	Evaporative cooling
	Evaporative cooling space	175,000	118,000	60,000	28.00	35.00	36.40	10,200,000	10,000,000	12,500,000	13,000,000	2,100,000	2,184,000	ing eliminated
810	Cooling Tower													from essential
	<u>Sub-Total:</u>							<u>10,200,000</u>	<u>10,000,000</u>	<u>12,500,000</u>	<u>13,000,000</u>	<u>8,575,000</u>	<u>8,918,000</u>	support staff
<b>D. RECREATIONAL FACILITIES:</b>														
701	Swimming Pool & Wading Pool							680,000		850,000	884,000			
702- 704	Tennis & Squash Courts							680,000		850,000	884,000			
	<u>Sub-Total:</u>							<u>1,360,000</u>	<u>1,360,000</u>	<u>1,700,000</u>	<u>1,768,000</u>	<u>1,700,000</u>	<u>1,768,000</u>	
<b>E. CAMPUS SITE DEVELOPMENT &amp; EXTERNAL WORKS:</b>														
	Campus Site Development							18,130,000	18,000,000	22,500,000	23,400,000			Gate house, Sewage
800	Gate House													treatment plant,
801	Water Tank, overhead													fire hydrants, and
03	Sewage Treatment													external lighting
804	Site, Landscape													decreased in scope
811	Underground water storage Tanks													and size.
	Generators (including Elec./ Civil work)							1,870,000	1,870,000	2,337,500	2,431,000			
	<u>Sub-Total:</u>							<u>20,000,000</u>	<u>19,870,000</u>	<u>24,837,500</u>	<u>25,831,000</u>	<u>24,837,500</u>	<u>25,831,000</u>	
	<b>TOTAL (A+B+C+D+E):</b>							<b>Rs. 76,474,000</b>	<b>71,495,000</b>	<b>89,368,750</b>	<b>92,943,500</b>	<b>91,934,547</b>	<b>95,618,608</b>	
	TOTAL ( " )							US \$ 10,475,890	9,793,836	12,242,295	12,731,986	12,593,773	13,098,439	(@Rs. 7.30/US \$)
	Additional for Adequate Specification							Rs. 6,700,000	5,100,000	6,375,000	6,630,000	6,375,000	6,630,000	
								US \$ 917,808	698,630	873,288	908,219	873,288	908,219	(@Rs. 7.30/US \$)
	<b>TOTAL:</b>							US \$ 11,393,698	10,492,466	13,115,583	13,640,205	13,467,061	14,006,658	(@Rs. 7.30/US \$)
								US \$ 10,081,697	9,284,242	11,605,303	12,069,515	11,916,309	12,393,770	(@Rs. 8.25/US \$)

(Plant quarantine deleted)



ICRISAT BUILDING PROGRAM

March 27, 1974

(EXTRACTED FROM ARCHITECT'S DESIGN DEVELOPMENT REPORT - JULY 1973)

No.	Type of Facility	GROSS AREA OF CONSTRUCTION						E S T I M A T E D C O S T						Remarks
		GROSS AREA OF CONSTRUCTION			U N I T C O S T			Archi- tect's		February 1974		March 1974		
		July 1973	Feb. 1974	March 1974	July 1973	February 1974	1974 +30%	July 1973	February 1974	+25%	+30%	+25%	+30%	
1	2	3 (sq.ft.)	4 (sq.ft.)	5 (sq.ft.)	6 (Rs.)	7 (Rs.)	8 (Rs.)	9 (Rs.)	10 (Rs.)	11 (Rs.)	12 (Rs.)	13 (Rs.)	14 (Rs.)	15
<u>A. INSTITUTIONAL BUILDINGS:</u>														
200	Administration	24,570		24,300	88.00	110.00	114.40	2,150,000		2,687,500	2,795,000	2,673,000	2,779,920	
203	Library	13,850		16,520	77.00	96.25	100.10	1,060,000		1,325,000	1,378,000	1,590,050	1,653,652	Includes 1560 sq.ft. future stack area & 5840 sq.ft. stilt area.
202	Auditorium	6,410		7,550	106.00	132.50	137.80	680,000		850,000	884,000	1,000,375	1,040,390	
306-X	Training Office	2,700		3,067	85.00	106.25	110.50	230,000		287,500	299,000	325,869	338,904	
307 X														
300	Laboratory I	22,260		20,400	128.00	160.00	166.40	2,850,000		3,562,500	3,705,000	3,264,000	3,394,560	
301	Laboratory II	22,260		20,400	128.00	160.00	166.40	2,850,000		3,562,500	3,705,000	3,264,000	3,394,560	
302	Laboratory III	22,260		20,227	104.00	130.00	135.20	2,315,000		2,895,750	3,009,500	2,629,510	2,734,690	
312	Plant Quarantine			(5,730)				(500,000) Deleted						Omitted from Phases (I&II) Can be accommodated in buildings constructed for temporary operational headquarters with limited modifications. Covered work area increased in size.
408	Crop Work Area	29,860	31,583	36,767	48.00	60.00	62.40	1,430,000	1,513,000	1,891,250	1,966,900	2,206,020	2,294,261	Shop increased in size.
401	Farm Machinery, Maintenance & Stores	48,640	52,640	56,296	52.00	65.00	67.60	2,540,000	2,749,000	3,302,000	3,573,700	3,659,240	3,805,610	
400	Mechanical, Electrical Services	9,470		9,176	64.00	80.00	83.20	610,000		762,500	793,000	734,080	763,443	
309	Radio Isotope Lab. Plant -propagation, soil storage.	21,150		16,872	73.00	91.25	94.90	1,540,000		1,925,000	2,002,000	1,539,570	1,601,153	
206-X	Chemical Store & Warehouse	10,570		12,847	46.00	57.00	59.80	490,000		612,500	637,000	732,279	768,251	
207-X														
208 X														
205	Canteen	9,620		9,620	77.00	96.25	100.10	740,000		925,000	962,000	925,925	962,962	
209	Laundry	2,080		2,326	86.00	107.50	111.80	180,000		225,000	234,000	250,045	260,047	

(Cont'd)

No.	Type of Facility	GROSS AREA OF CONSTRUCTION						E S T I M A T E D C O S T						Remarks
		GROSS AREA OF CONSTRUCTION			U N I T C O S T			Archi- tect's July	February 1974	February 1974		March 1974		
		July 1973	Feb. 1974	March 1974	July 1973	February +25%	1974 +30%			+25%	+30%	+25%	+30%	
3	4	5	6	7	8	9	10	11	12	13	14	15		
		(sq.ft.)	(sq.ft.)	(sq.ft.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	
<b>A. Institutional Buildings (Cont'd):</b>														
310-X 311 X	Greenhouses	24,000		24,000	54.00	67.50	70.20	1,314,000		1,642,500	1,708,200	1,620,000	1,684,800	
313	Main entrance Lab.			(1)										
314	Telephone Office, Workers Lounge			(2)										
500-X 501 X	Dormitories	63,600		79,237	90.00	112.50	117.00	5,680,000		7,100,000	7,384,000	8,914,163	9,270,729	Includes 12,900 sq.ft. of stilt area.
502	Flatlets	14,780		20,014	97.00	121.25	126.10	1,430,000		1,787,500	1,859,000	2,426,698	2,523,765	Includes 3,700 sq.ft. of stilt area.
700	Guest House/Recreation Centre.	17,500	15,500	16,323	86.00	107.50	111.80	1,500,000	1,329,000	1,661,250	1,727,700	1,754,723	1,824,911	Includes 12 guest rooms 2 suits - reduced in size.
703	Playing Fields													
204	Dining Centre	18,580		19,850	74.00	92.50	96.20	1,375,000		1,718,750	1,787,500	1,836,125	1,909,570	
	<u>Sub-Total:</u>							30,964,000	31,085,000	38,856,250	40,410,500	41,345,672	43,006,178	
<b>B. HOUSING:</b>														
600	Director's Residence	5,950	4,500	(4,500)	89.00	111.25	115.70	560,000	400,000	500,000	520,000	500,625	520,650	Being reduced in size.
601-X 602-X 603 X	International staff housing - 20 units (4,3 & 2 bedrooms)	59,620	45,000	(45,000)	105.00	131.25	136.50	6,240,000	4,710,000	5,887,500	6,123,000	5,906,250	6,142,500	Reduced in size.
610-X 611-X 612 X	Essential Support Staff housing - 36 units (3 and 2 bedrooms)	56,100		(56,100)	108.00	135.00	140.40	5,950,000	3,366,000	4,207,500	4,375,800	7,573,500	7,876,440	Specs. (and unit costs Reduced.
620-X 621 X	Other Support Staff housing - 32 units	17,600		(17,600)	68.00	85.00	88.40	1,200,000	704,000	880,000	915,200	1,496,000	1,555,840	Specs. (and unit costs Reduced.
	<u>Sub-Total:</u>							13,950,000	9,180,000	11,475,000	11,934,000	15,476,375	16,095,430	

(Cont'd)

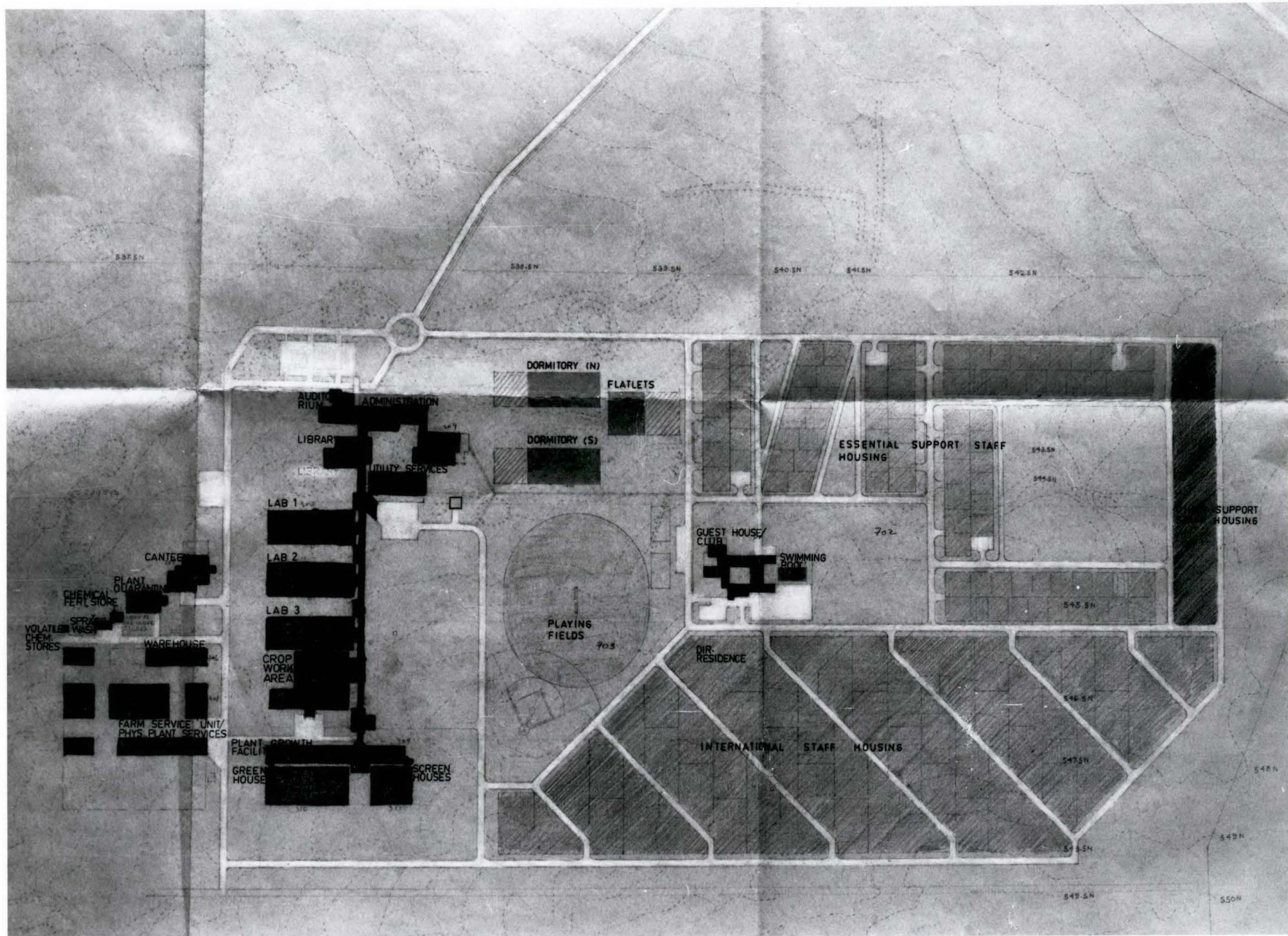
(1) See Building 300/1

(2) See Building 308

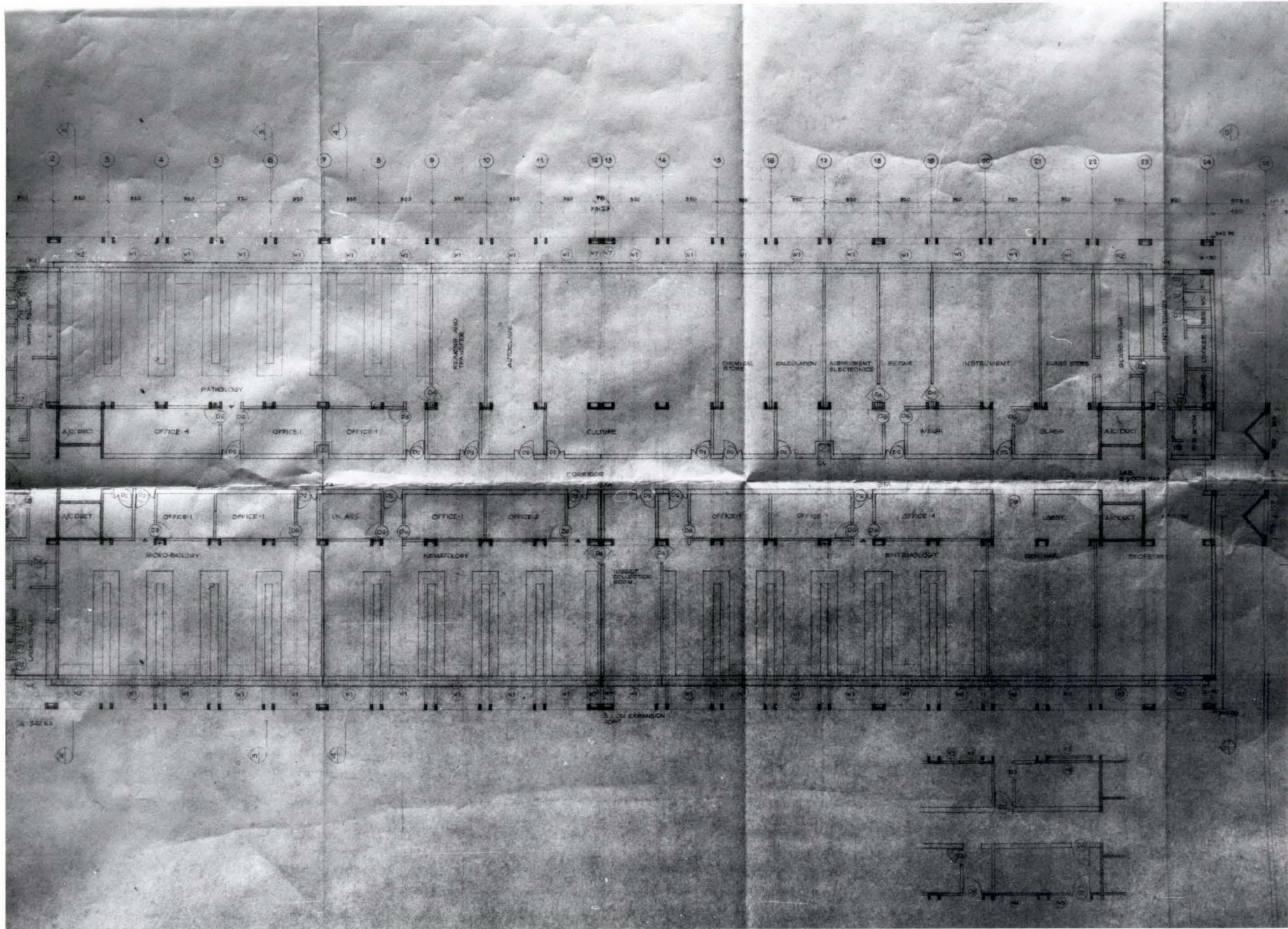


		E S T I M A T E D C O S T													
No.	Type of Facility	GROSS AREA OF CONSTRUCTION			UNIT COST			Architect's July 1973	ESTIMATED COST						Remarks
		July 1973	Feb. 1974	March 1974	July 1973	February 1974	+30%		February 1974	+25%	+30%	March 1974	+25%	+30%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		(sq.ft.)	(sq.ft.)	(sq.ft.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	
<b>C. AIR-CONDITIONING INSTALLATION:</b>															
	Air-Conditioned Space	225,000		185,000								6,475,000	6,734,000	Evaporative cooling eliminated from essential support staff housing.	
	Evaporative cooling space	175,000	118,000	60,000	28.00	35.00	36.40	10,200,000	10,000,000	12,500,000	13,000,000	2,100,000	2,184,000		
810	Cooling Tower							10,200,000	10,000,000	12,500,000	13,000,000	8,575,000	8,918,000		
	<u>Sub-Total:</u>							<u>10,200,000</u>	<u>10,000,000</u>	<u>12,500,000</u>	<u>13,000,000</u>	<u>8,575,000</u>	<u>8,918,000</u>		
<b>D. RECREATIONAL FACILITIES:</b>															
701	Swimming Pool & Wading Pool							680,000		850,000	884,000				
702-704	Tennis & Squash Courts							680,000		850,000	884,000				
	<u>Sub-Total:</u>							<u>1,360,000</u>	<u>1,360,000</u>	<u>1,700,000</u>	<u>1,768,000</u>	<u>1,700,000</u>	<u>1,768,000</u>		
<b>E. CAMPUS SITE DEVELOPMENT &amp; EXTERNAL WORKS:</b>															
	Campus Site Development							18,130,000	18,000,000	22,500,000	23,400,000			Gate house, Sewage treatment plant, fire hydrants, and external lighting decreased in scope and size.	
800	Gate House														
801	Water Tank, overhead														
803	Sewage Treatment														
804	Site, Landscape														
811	Underground water storage Tanks														
	Generators (including Elec./ Civil work)							1,870,000	1,870,000	2,337,500	2,431,000				
	<u>Sub-Total:</u>							<u>20,000,000</u>	<u>19,870,000</u>	<u>24,837,500</u>	<u>25,831,000</u>	<u>24,837,500</u>	<u>25,831,000</u>		
	<b>TOTAL (A+B+C+D+E):</b>							<b>Rs. 76,474,000</b>	<b>71,495,000</b>	<b>89,368,750</b>	<b>92,943,500</b>	<b>91,934,547</b>	<b>95,618,608</b>		
	TOTAL ( " )							US \$ 10,475,890	9,793,836	12,242,295	12,731,986	12,593,773	13,098,439	(@Rs. 7.30/US \$)	
	Additional for Adequate Specification							Rs. 6,700,000	5,100,000	6,375,000	6,630,000	6,375,000	6,630,000		
								US \$ 917,808	698,630	873,288	908,219	873,288	908,219	(@Rs. 7.30/US \$)	
	<b>TOTAL:</b>							US \$ 11,393,698	10,492,466	13,115,583	13,640,205	13,467,061	14,006,658	(@Rs. 7.30/US \$)	
								US \$ 10,081,697	9,284,242	11,605,303	12,069,515	11,916,309	12,393,770	(@Rs. 8.25/US \$)	

(Plant quarantine deleted)









**LEGEND**

MAIN DRAINAGE LINES  
MINOR DRAINAGE LINES AND DRAINS  
ROADS

TERRACES -4% GRADE (OR DIRECT 4%)

BASIN AREA OF TANKS

PADDY AREAS

WET AREAS POSSIBLY REQUIRING DRAINAGE

LIVESTOCK AREAS (FOR FENCING)

ARABLE AREA -RAINFED

RESEARCH WATERSHED AREAS

FOREST AREAS

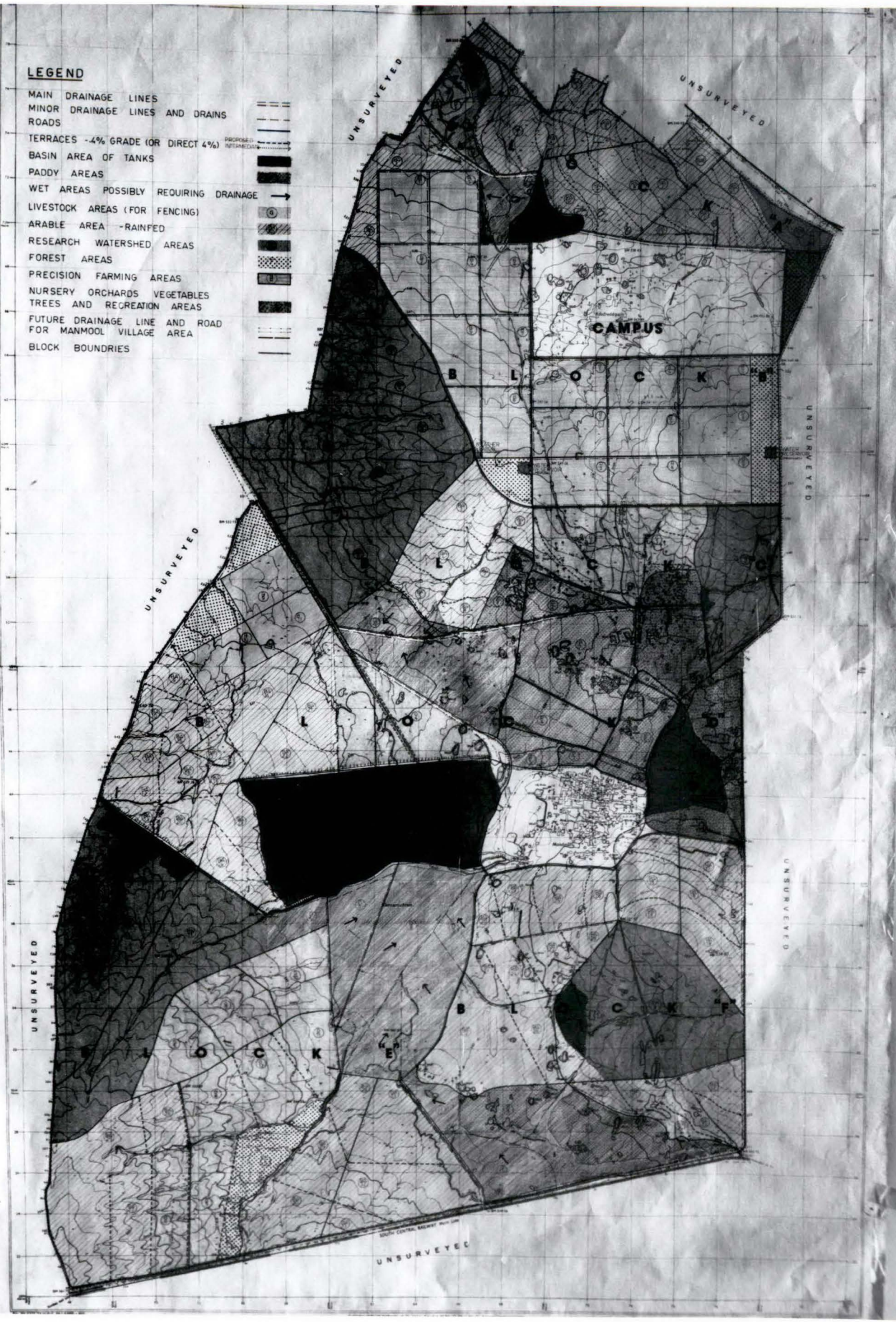
PRECISION FARMING AREAS

NURSERY ORCHARDS VEGETABLES

TREES AND RECREATION AREAS

FUTURE DRAINAGE LINE AND ROAD  
FOR MANMOOL VILLAGE AREA

BLOCK BOUNDRIES





43a  
cc: D21

April 2, 1974

TO: ICRISAT Subcommittee  
FROM: Secretary  
SUBJECT: Views of United Kingdom for ICRISAT  
Subcommittee Meeting of April 4

The following message has been received from Ralph Melville concerning the meeting of ICRISAT donors on April 4:

"UK cannot be represented but confirms high priority objectives ICRISAT in context total Consultative Group activities. Recommend that points made in paras 18 to 21 be put to Board for further consideration because further economies could doubtless be made but some of the issues raised seem to be based on unsubstantiated comparisons with facilities at other institutes. UK considers that ICRISAT now has housing proposals about right and feels strongly that housing arrangements at CIAT and CIMMYT at commuting distance of one hour and including transportation costs and other disadvantages on permanent basis most unsatisfactory. While further minor economies on housing might be made adequate proportion housing on site vital to proper conduct of scientific and other work of ICRISAT.

"Factual information on cost predictions is not very convincing. In view of fact that construction cost per unit area at Hyderabad is not yet even known and effect of other factors such as stockpiled steel and availability final working drawings the presentations may well be misleading. Director Cummings should be able to reassure donor group. He will be able to put views of Group to Board in May. UK is anxious to ensure that time scale of ICRISAT development is not upset because delay likely to result in even higher costs on account of inflation trends."

440098 IBRD UI

MINISTRANT LDN

INCOMING TELEX

RECEIVED

1974 APR -1 PM 2: 23

COMMUNICATIONS  
SECTION

~~BHC~~  
HG  
CJ.

FROM ODA LONDON

DATED 1ST APRIL 1974

Distribution

Mr. Graves

IMMEDIATE

INTBAFRAD

WASHINGTON

MODEV 011 OF 1.4.74

IMMEDIATE

=====

FOR GRAVES FROM MELVILLE. ICRISAT DONORS MEETING.

" UK CANNOT BE REPRESENTED BUT CONFIRMS HIGH PRIORITY OBJECTIVES  
ICRISAT IN CONTEXT TOTAL CONSULTATIVE GROUP ACTIVITIES.  
RECOMMEND THAT POINTS MADE IN PARAS 18 TO 21 BE PUT TO BOARD  
FOR FURTHER CONSIDERATION BECAUSE FURTHER ECONOMIES COULD  
DOUBTLESS BE MADE BUT SOME OF THE ISSUES RAISED SEEM TO BE  
BASED ON UNSUBSTANTIATED COMPARISONS WHICH FACILITES AT  
WITH.



OTHER INSTITUTES. UK CONSIDERS THAT ICRISAT NOW HAS HOUSING PROPOSALS ABOUT RIGHT AND FEELS STRONGLY THAT HOUSING ARRANGEMENTS AT CIAT AND CIMMYT AT COMMUTING DISTANCE OF ONE HOUR AND INCLUDING TRANSPORTATION COSTS AND OTHER DISADVANTAGES ON PERMANENT BASIS MOST UNSATISFACTORY. WHILE FURTHER MINOR ECONOMIES ON HOUSING MIGHT BE MADE ADEQUATE PROPORTION HOUSING ON SITE VITAL TO PROPER CONDUCT OF SCIENTIFIC AND OTHER WORK OF ICRISAT.

"FACTUAL INFORMATION ON COST PREDICTIONS IS NOT VERY CONVINCING. IN VIEW OF FACT THAT CONSTRUCTION COST PER UNIT AREA AT HYDERABAD IS NOT YET EVEN KNOWN AND EFFECT OF OTHER FACTORS SUCH AS STOCKPILED STEEL AND AVAILABILITY FINAL WORKING DRAWINGS THE PRESENTATIONS MAY WELL BE MISLEADING. DIRECTOR CUMMINGS SHOULD BE ABLE TO REASSURE DONOR GROUP. HE WILL BE ABLE TO PUT VIEWS OF GROUP TO BOARD IN MAY. UK IS ANXIOUS TO ENSURE THAT TIME SCALE OF ICRISAT DEVELOPMENT IS NOT UPSET BECAUSE DELAY LIKELY TO RESULT IN EVEN HIGHER COSTS ON ACCOUNT OF INFLATION TRENDS."

MINISTRANT

✓ 67

THE INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

I *The Mission of ICRISAT*

Rainfed agriculture produces a major share of the food supply for more than 400 million persons who live in the world's semi-arid tropics. Throughout these areas of four continents, most food is consumed by the farmer's family or by those who live relatively near.

While the Green Revolution has brought nutritional rewards to many parts of the developing world, it has not brought equally significant benefits to the unirrigated tracts of semi-arid and arid tropics. Irrigation waters and capital, which activate the technologies of the Green Revolution, are not similarly available where for half or more of the year evapotranspiration exceeds rainfall. There, a few traditional crops adapted to rainfed agriculture comprise and set limits on the dietary choices of the people.

Two cereals - sorghum and millet - predominate as staples in these diets. They are grown on a combined total of 71 million hectares. Various grain legumes supplement the cereals: dry beans and cowpeas are widely grown in the semi-arid tropics of Africa, Australia and Latin America; chickpea and pigeon pea are leading high-protein grains in the semi-arid regions of Asia, particularly India, occupying about 13 million hectares.

ICRISAT was created to close unacceptable gaps in the food and population equation. At current rates of food production and population increase in India, for example, per capita calorie production is falling despite important gains from high-yielding varieties of rice and wheat.

Two approaches characterize the ICRISAT response:



Farming systems scientists - ICRISAT's and others from the international scene - see exciting possibilities of developing new systems to meet the age-old hazards of semi-arid tropic farming: alternately too much water and drought during monsoon, too little water for the rabi season. There are impressive early results from watershed-based farming system trials - utilizing ridge-planted crops on graded contours to catch and hold rainfall for optimum infiltration, draining off excess via grassed waterways to deep tanks for storage as a resource to be pumped back on the donor watershed when needed to save a crop during kharif drought or to assure a second crop during rabi season. \*

Conditions differ over the vast geographic areas defined as semi-arid tropics. Two of the great soil types - black and red soils - are represented on the ICRISAT experiment station, but many conditions cannot be simulated on the one location at Hyderabad. Arrangements have been made with national and international centres where needed to broaden the base for testing new materials and new ideas.

\* "monsoon", "kharif" and "rabi" are terms that don't fit all the zones of ICRISAT interest - i.e., Western Africa.

DRAFT

II. The 1975 Budget

On the basis of intention by donors, it is estimated that ICRISAT will receive about \$8,000,000 for core programs and capital development in 1975.

Of the amount received, ICRISAT expects to spend \$3,750,000 for its core programs of training and research. This is an increase of \$1,150,000 over the expenditures estimated for 1974. Of the increase, \$767,000 are due to the fact that ICRISAT is still growing toward its originally planned levels of staff and core activity. The balance is due to rising costs. Individual increases are as follows:

- A. Addition of 8 principal scientists brings staffing nearly to the complement planned \$254,000
- B. Supervisory, technical, support and labour personnel needs, expanded to sustain the planned research and outreach efforts, require additional inputs 71,000
- C. Increased support for outreach efforts through training and conferences 62,000
- D. Service needs associated with expanded programs and enlarged staff require increased support of all kinds - petrol, fertilizer, chemicals, electricity, travel, paper, supplies, etc. 380,000



E. Worldwide increases in prices requires 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) 383,000

\$1,150,000

The remainder of the funds received by ICRISAT for 1975 will be applied to its capital development program: the construction of buildings and the acquisition of equipment. At the present time the amount of capital expenditures by ICRISAT has recently been the subject of discussion with donors; and at this writing, final estimates by contractors have not yet been received. If funds available should prove to be more than needed for the financing of ICRISAT's capital program in 1975, the balance will be applied to ICRISAT's needs in 1976. To guard against the disruptive consequences of a possible shortfall, donors have urged that the World Bank take steps to deal with the cash flow problem for the capital construction period of ICRISAT.

III. The 1975 ~~Budget~~ *Research Program*

<u>Activity</u>	<u>Staff</u>	<u>1975 Expenditures</u>
FARMING SYSTEMS	4 principal, 1 supporting scientist	\$321,000

With 15 experimental watershed units formed and operational in 1974, the Farming Systems investigations now extend over both red and black soils (two of the three great soils groups in the semi-arid tropics). Cultural practices under study range from age-old fallowing with bullock-powered implements to the most advanced concepts of increasing water infiltration, storage of runoff with minimal evaporative loss, and optimum use of water back on crops of the donor watershed. Addition of an agricultural climatologist in 1975 broadens the staff's abilities to formulate systems for trial in other agro-climatic areas. An agricultural engineer, with emphasis on implements, increases capability in adapting or inventing machines that may have economic significance under alternative systems. A ridger-cum-planter, designed to be drawn by bullocks, has already been tested - indicating promise that new concepts can be related to indigenous power sources.

PLANT SCIENCES: Sorghum & Millet	7.25 principal, 4.5 support scientists	\$513,000
----------------------------------	--	-----------

It is anticipated that all principal scientists incereals improvement will be on board by the middle of 1975. Addition of a principal to direct germ plasm collection and maintenance will free other plant breeders to concentrate fully on genetic improvement. More rapid progress is expected as late concepts of statistical genetics are used to design crossing and and recurrent selection procedures. Replicated trials on significant



factors - yield, disease, insects (particularly shootfly), weeds (notably striga), grain quality - are proceeding under the attention of principals in each of those fields of science. This concentrated attention from the beginning of accelerated breeding work assures minimum delays in having materials ready for national and regional programs. With irrigation, three generations are grown each year at the Hyderabad location, gaining valuable longitudinal years. Improvement programs proceed from more than 20,000 lines in sorghum and over 3,000 pearl millet lines gathered from the world's best collections. Well over 1,000 millet crosses have been added by ICRISAT breeders.

PLANT SCIENCES: Chickpea & Pigeon pea 6.75 principal, 3.75 support scientists  
\$467,000

More than 3,000 lines from leading world sources of each crop have been gathered, grown and observed at Hyderabad for data on major plant characteristics. Still more elite collections are to be added, some reported to have protein content nearly 50 percent higher than the usual 18 - to 24 - percent range. The year 1975 will be the first with a full complement of principal scientists engaged in pulse improvement. Vital basic work by the plant physiologist and microbiologist - joining in 1975 - is expected to fill gaps in fundamental knowledge about these crops on which relatively little research has been done. Crossing of these mainly self-pollinating crops is a tedious hand process; 400 to 500 crosses per year is a high level of achievement. The relatively long duration of most lines permits only a single generation annually at Hyderabad. Off-season nurseries - one in Lebanon and perhaps others in India - will be established to speed development of new crosses and hasten necessary selection and testing. A

*Do some  
arrangements  
actually  
exist now,  
and can  
they be  
specified?*

## BIOCHEMISTRY, FOOD TECHNOLOGY &amp; NUTRITION LABORATORY

1 principal, 1 support scientist \$88,000

Improved nutritional quality of these cereals and pulses is a central objective in the ICRISAT mandate. A principal scientist in biochemistry will become part of the regular staff in 1975. The laboratory continues routine protein assay of grain from all lines of all crops. Its workload increases directly as more lines are introduced from outside or from those developed in the breeding program. These samples run at a rate of 160 samples per day - are subjected to more complex amino acid analysis when the assay shows promising protein levels. Attention will be directed soon to some of the food technology aspects: cooking time and effect of cooking on nutritional quality; storage techniques, particularly for cereals; and consumer preferences in the grains, etc.

IV. Training and Conferences

TRAINING &amp; FELLOWSHIPS 1 principal, 1 support \$216,000

All categories of training will grow in 1975, ranging from an increase of 67 percent to double the 1974 level, the first year of <sup>t</sup>grain<sup>g</sup>ing. The increase requires almost a doubling of training staff and more funds for rising travel costs, more for scholarships and supplies. The 1975 training candidates will include (first number refers to foreign and second to Indian participants): post doctoral fellows, 3 and 1; research fellows, 3 and 1; in-service trainees, 30 and 10; plus 2.5 man-years for local short-term trainees.

CONFERENCES &amp; SYMPOSIA \$77,000

Three gatherings of scholars are planned for 1975, an increase of one-third over the two budgeted for 1974. Each 4-day conference or symposium will be limited to 15 foreign participants and 7 local. Principal expenses are for travel and per diem; honoraria are not planned.



## *V Support Operations*

### LIBRARY-DOCUMENTATION

\$75,000

The ICRISAT library has established loan arrangements with several agricultural and social science libraries in the area, helping to provide research literature without the cost of assembling its own complete collection. However, a core library of standard works and current periodicals in major fields of work are vital support needs. Microfilming for efficient storage and reference will be added in 1975, along with equipment for photocopy and other modern means of increasing access to needed literature.

### INFORMATION SERVICES

2 principal, 3 supporting staff

\$107,000

As staff and research activity quicken, need for information services increases. After a primarily development first year in 1974, it is anticipated that 1975 will bring a number of publishing needs - information reviews on ICRISAT work with each of the principal crops and the farming systems investigations; reporting and dissemination of the scientific results of 1974 investigations; reporting to support groups throughout the world; establishing communication with scientists and extension systems, particularly in target countries of the semi-arid tropics. With the establishment of printing facilities and enlargement of training programs and conferences-symposia, additional supporting staff will be added to serve these needs. A growing stream of visitors - from eminent scientists to the casually interested person - requires continuing attention.

### COMMON LAB SERVICES

\$51,000

An active research program of the diversity found on the ICRISAT experiment station demands available and flexible laboratory support services. There will be needs, for example, to make soil tests and plant tissue analyses, and to solve an unknown variety of other analytical problems. A small staff headed by an innovative principal scientist, providing service

## STATISTICS

\$60,000

Rising tempo of field research generates vast amounts of data that require sophisticated analyses; the concepts of statistical genetics brings a need for modern computing services; econometric analyses will be central to the research effort in agricultural economics. All these programs will reach takeoff in the 1975 research program, necessitating a sharp increase in budgeted support for statistics.

VI. *General Administration*

## BOARD OF TRUSTEES

\$75,000

It is anticipated in 1975 that the Board of Trustees will meet once at Hyderabad as a full body. Three sessions of the Executive Committee will be convened.

## ADMINISTRATION

2 principal, 5 supporting

\$440,000

Addition in 1975 of an assistant director (treasurer-comptroller) will bring the administrative staff to full complement at principal and high support levels. Although numerous additions will be made at principal and support levels throughout the organization, the management group is not enlarged. Increases will be needed at general support (from 23 in 1974 to 30 in 1975) and in labourer category, from 30 to 48.

## PHYSICAL PLANT SERVICES

1 principal

\$180,000

As the full scientific complement is assembled, needs for field, office and laboratory space increases. The associated needs of roads, maintenance, repairs and the host of environmental services grow with staff and activity. A doubling of the 1974 level of supplies and staff (primarily junior technical, general support and skilled/unskilled labour) will be necessary to provide required physical plant services.



VII General Operations

GENERAL OPERATIONS

\$165,000

Communications costs rise as the staff increases. Postage costs will mount as the worldwide communication through printed material gets underway. Temporary location of principal staffs in three Hyderabad locations requires three telephone switchboards. Cable and telex and telephone communication demand increases as the staff and activity increase, and rates rise.

Office occupancy costs rise in relation to the number of persons to be officed and serviced with office equipment and furnishings. The staff increase in 1975 compared to 1974 is reflected in higher costs in this category.

Staff housing (initial expenses) budget represents a notable reduction from previous years despite an anticipated increase in number of families to be housed. The reason is that the special housing needs (light house-keeping kits, for example) have been assembled and are re-used. The housing allowance arrangement has proved to be almost self-supporting.

No change is anticipated in 1975 with regard to general insurance.

Increasing price levels and increased staff are expected to require a doubling of expenditures for general supplies.

VIII Capital Development Program

March 29, 1974

(probably no figures  
can be used here  
by the time of  
circulation to the CG)

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS,  
HYDERABAD.

~~CORE~~  
1975 BUDGET.

Table 1.

SUMMARY OF COSTS BY PROGRAM AND ACTIVITY, 1973-1976.

Major Activities	(U.S. \$ thousands)			
	Actual 1973	Budget 1974	Estimated 1975	Project 1976
<u>1. RESEARCH:</u>				
Farming Systems	120.2	199	321	394
Plant Sciences:				
Sorghum & Millet	302.2	476	513	612
Chickpea & Pigeonpeas	3.8	343	467	572
Agriculture Economics	0.4	114	145	150
Biochemistry-Food Tech., Nutrition	--	81	88	95
Total:	426.60	1213	1534	1823
<u>2. TRAINING &amp; CONFERENCES:</u>				
Training & Fellowships	--	181	216	291
Conferences & Symposia	--	50	77	77
Total:		231	293	368
<u>3. SUPPORT OPERATIONS:</u>				
a) Service Activities:				
Library-Documentation	20.1	70	75	128
Information Services	--	--	107	115
Common Lab. Services	--	13	51	70
Farm Services	171.0	250	307	372
Transportation - Motor Pool	69.9	83	100	110
Statistics	--	16	60	75
Total:	261	432	700	870



Major Activities	(U.S. \$ thousands)			
	Actual 1973	Budget 1974	Estimated 1975	Projected 1976
b) General Administration:				
Board of Trustees	40.7	65	75	75
Administration	267.6	425	440	440
Physical Plant Services			160	226
<b>Total:</b>	<b>308.3</b>	<b>490</b>	<b>675</b>	<b>741</b>
4. GENERAL OPERATIONS:				
Communications	19.2	31	55	60
Office Occupancy	51.6	38	60	70
Staff Housing (Initial Expenses)	27.2	35	5	5
General Insurance	0.2	15	15	15
General Supplies	45.5	15	30	30
<b>Total:</b>	<b>143.7</b>	<b>134</b>	<b>165</b>	<b>180</b>
5. ALL OTHER:				
Contingency <sup>1/</sup>	--	100	383	518
		(4%)	(11%)	(13%)
<b>Grand Total:</b>	<b>1139.60</b>	<b>2600</b>	<b>3750</b>	<b>4500</b>

1/ Also applicable to capital expenditures

43a  
cc: DS

March 29, 1974

Dear Ralph:

Here is a memorandum and a letter on the subject of the Asian Development Bank and its attitude toward research sponsored by the Consultative Group. It would be quite appropriate for you to follow this up, at your convenience, by an approach to Mr. Krishna Moorthi, the Vice President of AsDB. Perhaps on some journey to the States, you could drop by Manila to see him.

Krishna Moorthi will make the final recommendation to the President of his Bank about what action to take on the international agricultural research centers. Just beneath his level, however, it will be very important to win the support of Dr. S. C. Hsieh, Director of Projects. Dr. Hsieh will not only have an important voice in determining the policy question, but thereafter, if the policy is decided affirmatively, will be the official of the Bank who will be directly concerned with the evaluation of any program put forward for AsDB support and with fixing the extent of support (both amount and duration) of any program chosen. Dr. Hsieh is intensely interested in problems of water management; he designed and chaired a regional conference on this subject held for southeast Asian countries a year or two ago.

Sincerely,

Harold Graves

Enclosures

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

cc with enclosures to Dr. Cummings in New York


*HG*  
HGraves:apm



93a

Mr. Thomas D. Rimpler

March 27, 1974

Bruce M. Cheek 

ICRISAT Subcommittee Meeting

This memo is to confirm the use of Conference Room E 1244 for Thursday, April 4, 1974, for a meeting of the ICRISAT Subcommittee of the Consultative Group on International Agricultural Research.

The meeting will commence at 9:30 a.m. on April 4, and continue all day.

We will require tape recordings for the Subcommittee meeting.

Thank you

:mcj

INCOMING CABLE

~~BHC~~  
~~NG~~  
CJ

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SECTION

File ICRISAT

ZCZC 248423 RC013 PDD0741 RMF5028 KNY070 MBB1193 MDS559/26  
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SECUNDERABAD 71/68 26 1316 PAGE 1/50

MARCH 26, 1974

Distribution

Mr. Graves  
Agriculture & Rural Development

LT  
INTBAFRAD  
WASHINGTONDCUSA

GRAVES YOUR MARCH SIXTEENTH LETTER WITH DRAFT INTERNAL PAPER  
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APPROACH AND MOMENTUM CAN BE  
MAINTAINED

CUMMINGS CRISAT SECUNDERABAD

NOTE: TEXT AS RECEIVED.

COL LT 1975-76



93a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: MARCH 26, 1974

CLASS OF  
SERVICE: FULL RATE

RCA

COUNTRY: INDIA

TEXT: Cable No.: 1. HAVE MAILED DISCUSSION PAPER ON [CRISAT] CAPITAL PLAN TO YOU IN INDIA AND CARE OF FORD FOUNDATION NEW YORK. IT SUGGESTS CONSIDERATION OF REDUCTION IN BASIC CAPITAL PLAN WITH UPWARD ADJUSTMENTS TO BE MADE WHENEVER INCREASED FUNDS BECOME AVAILABLE WITHIN THE PERIOD 1975 THROUGH 1977.

2. SUGGEST YOUR GIVE DONOR GROUP STRAIGHTFORWARD ORAL EXPOSITION OF ABOUT THIRTY MINUTES EXPLAINING MAIN FEATURES ~~AND~~ PRINCIPAL BUILDINGS AND CHIEF WORK TO BE PERFORMED UNDER YOUR CAPITAL PROGRAM. WOULD BE HELPFUL IF YOU WOULD ALSO SAY SOMETHING ABOUT STANDARDS OF CONSTRUCTION AND COSTS PER SQUARE FOOT. EXPOSITION OF EQUIPMENT ESTIMATES ALSO WOULD BE PERTINENT.

3. BRING WHATEVER PICTURES YOU WISH. LETTER PAGE SIZED MAP OF YOUR CAMPUS MIGHT ALSO BE DESIRABLE. WE CAN DUPLICATE HERE INCLUDING REDUCTION TO SIZE OF YOU CAN PROVIDE BASIC COPY.

4. BAUM AWAY TODAY BUT ASKS ME TO TELL YOU HE WOULD APPRECIATE IT IF YOU COULD BE IN WASHINGTON AFTERNOON OF APRIL THREE FOR ADVANCE DISCUSSION. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY: H  
NAME: Harold N. Graves, Jr.  
DEPT.: Agriculture and Rural Development  
SIGNATURE: *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

CLEARANCES AND COPY DISTRIBUTION:

REFERENCE:

For Use By Communications Section

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *[Signature]*

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: CUMMINGS DATE: MARCH 26, 1971

CLASS OF SERVICE: FULL RATE  
ORIGIN: SECUNDERABAD

COUNTRY: INDIA

TEXT: Cable No.

1. I HAVE MAILED DISCUSSION PAPER ON FOREIGN CAPITAL PLAN TO YOU IN INDIA AND GAVE OF FORD FOUNDATION NEW YORK. IT SUGGESTS CONSIDERATION OF REDUCTION IN BASIC CAPITAL PLAN WITH UPWARD ADJUSTMENTS TO BE MADE WHENEVER INCREASED FUNDS BECOME AVAILABLE WITHIN THE PERIOD 1972 THROUGH 1977.

2. SUGGEST YOUR GIVE BOMOR GROUP STRAIGHTFORWARD DEAL EXPOSITION OF ABOUT THIRTY MINUTES EXPLAINING MAIN FEATURES AND PRINCIPAL BUILDINGS AND CHIEF WORK TO BE PERFORMED UNDER YOUR CAPITAL PROGRAM. WOULD BE HELD IN YOU WOULD ALSO SAY SOMETHING ABOUT STANDARDS OF CONSTRUCTION AND COSTS PER SQUARE FOOT. EXPOSITION OF EQUIPMENT ESTIMATES ALSO WOULD BE PERTINENT.

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GRAVES

NOT TO BE TRANSMITTED

CLEARANCES AND COPY DISTRIBUTION

AUTHORIZED BY: H

NAME: Harold N. Graves, Jr.

DEPT: Agriculture and Rural Development

SIGNATURE: *Harold N. Graves, Jr.*

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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MARCH 26, 1974

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Mr. Graves  
Agriculture & Rural Development

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INTBAFRAD  
WASHINGTONCUSA

GRAVES YOUR MARCH SIXTEENTH LETTER WITH DRAFT INTERNAL PAPER  
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CONSTRUCTION PERIOD STOP HAVE POSTPONED INVITATION TENDRS  
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STRATEGIES BUT HOPE POSITIVE  
APPROACH AND MOMENTUM CAN BE  
MAINTAINED

CUMMINGS (CRISAT) SECUNDERABAD

NOTE: TEXT AS RECEIVED.

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Distribution:

Mr. Graves  
Agriculture & Rural Dev.

G3a

MARCH 22, 1974

INTSAFRAD

WASHINGTONDC-2043 USA

(GRAVES) REURCAD MARCH TWENTYONE TENDERS BEING POSTPONED STOP  
UPDATING INFORMATION RECENTLY SUPPLIED ON ITEMS REQUESTED URCAR  
MARCH EIGHT STOP WILL RELAY BY TELEPHONE FROM NEWYORK MORNING  
APRIL ONE

CUMMINGS CRISAT SECUNDERABAD

CCL WASHINGTONDC-2043



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

March 25, 1974

TO: ICRISAT Donors  
FROM: Executive Secretariat  
SUBJECT: Capital Plan of ICRISAT

1. This will confirm that a meeting of ICRISAT donors is to take place on Thursday, April 4, at the headquarters of the World Bank in Washington. It will begin at 9:30 in the morning, in Room E 1039 of the Bank. That room is most easily reached from the street entrance near 19th and G Streets, N.W.

2. The purpose of the meeting is to discuss the capital plan of ICRISAT. Dr. Cummings, the Director of ICRISAT, will attend the meeting and will describe the capital plan.

3. A paper concerning the plan, prepared by the Secretariat, is attached for discussion at the meeting.

Attachment  
HG:mcj

Discussion Paper:

CAPITAL PLAN OF ICRISAT

1. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is now nearly ready to begin the process of inviting and evaluating tenders for the construction of the permanent facilities at Hyderabad, India. The Institute is the first of the international agricultural research centers to have been founded under the auspices of the Consultative Group, and it is the first for whose capital costs the Consultative Group, rather than an individual donor, has assumed responsibility.

2. The design development report of the architects planning the buildings of ICRISAT was reviewed by the Institute's Governing Board in August 1973. The report was accepted, with some modifications, in so far as it applied to the operational buildings of the Institute, and the architects were asked to provide working drawings and cost estimates on this part of the project by March 15, 1974. The architects were instructed to reduce their plans for housing of part of the ICRISAT staff, and were asked to provide working drawings on this part of the project by May 31, 1974.

3. Donors who are to provide the financing of the Institute are now asked to specifically review the capital plans of ICRISAT, in order to assure that the scale and quality of the installations proposed have their support, and in order to assure that the plan actually can be funded.

4. Consideration of the capital plan has a significance that goes beyond ICRISAT. Members of the Consultative Group have agreed in principle



to finance the capital plans of two additional institutes (the International Laboratory for Research on Animal Diseases, in Nairobi, and the International Livestock Center for Africa, with headquarters in Addis Ababa), and it is likely that before the end of 1974 the Group will be asked to accept responsibility for establishing an agricultural research center for the Near East and North Africa. The capital plans of these new institutes will be presented for the consideration of donors later in 1974 and in 1975. Judgments regarding the scale and standards to which ICRISAT is to be built will have substantial implications for the standards of these future installations.

5. The judgment of donors with respect to ICRISAT will have to be formed, moreover, against the background of increasing financial stringency. Not only are the needs of new Centers, including ICRISAT, to be considered, but the requirements of existing centers, in a period of rapidly rising prices, are increasing beyond even recent expectations. All the donors to ICRISAT are contributing to other international agricultural research institutes as well, and the amount of funding for ICRISAT will be of importance as one determinant, among others, of the funding to be received by other centers.

6. In the meantime, ICRISAT's mission of research and training is considered to be as urgent as ever. The crops to be investigated are literally vital to large populations in the tropics, especially in Asia and Africa. ICRISAT's study of systems of dryland farming is the first to be undertaken by any of the centers of the Consultative Group network, and is significant for the type of agriculture on which most of the rural population of the tropics depends.

II.

7. Donors are asked to consider two aspects of ICRISAT's capital plan. One is the scale and quality of installations proposed, in terms of justification and suitability. The other is the scope and timing of the capital program in relation to the flow of funds likely to be available.

8. Of ICRISAT's proposed capital expenditures in 1974-77, about 20 per cent are for equipment; 80 per cent are for site preparation and development, construction of buildings, and fees of architects and consultants. The estimates, exclusive of contingencies, are \$3.1 million for equipment and \$11 million for construction and associated items.

9. The Secretariat has not obtained an ICRISAT equipment list; but the Institute has provided comprehensive information about the remainder of its capital plan. Tabular information concerning the plan, apart from equipment purchases, is given in Appendix I. The plan includes (A) institutional buildings, (B) staff housing, (C) air-conditioning and mechanical equipment, (D) recreation facilities and (E) site development. The relative weight of these elements, within the total construction program, is as follows:

<u>Category of Work</u>		<u>% of Total Construction Cost</u>
Institutional Buildings	...	43
Staff Housing	...	13
Air-Conditioning/Mechanical	...	14
Recreational Facilities	...	2
Campus Site Development and External Works	...	28
		<hr/> 100.



10. Among institutional buildings, principal structures are

An administration building

A library

An auditorium

Three laboratory buildings

Workshops, storage buildings and greenhouses

Two dormitories for trainees

Flatlets for married trainees

A guest house

A dining center

11. Housing facilities are composed of

21 houses for senior scientists (the projected senior staff complement is 36)

36 houses for support staff

32 units for work force.

12. In size, ICRISAT's headquarters facilities, as planned, approach those of IITA, the largest of the international agricultural research centers in this respect. In general pattern, they are similar to the facilities of the other centers of the Consultative Group network, and especially of IITA and IRRI. They are to be placed on a highly advantageous site, chosen largely on the recommendation of the Director of ICRISAT, and they provide an excellent basis from which to proceed toward the Institute's objectives of research and training.

### III.

13. Within the plan, there are a number of features to which donors

may wish to give particular consideration, with a view to suggesting guidelines and alternatives for consideration by the management and Governing Board of ICRISAT.

14. The matter of construction standards, and of cost per unit of construction, has been of special concern to ICRISAT's management and Governing Board; and planned costs have been tangibly reduced from those originally proposed by the architects.

15. A standard of materials and costs above the range of comparable buildings in India can be justified in view of the special functions of the Institute. How far above is a question which donors may wish to discuss.

16. Detailed figures have not had time to reach the Consultative Group Secretariat; but in the meantime, the cost of ICRISAT's institutional buildings (see Appendix I) appears to be in the range of 850-900 rupees per square meter. This compares with a cost of around Rs 540-550 per square meter which is typical for administrative and laboratory buildings at agricultural universities in southern India (Tamil Nadu), and with costs of Rs 430-460 per square meter typical for dormitories and apartment units.

17. The average cost for staff housing planned at ICRISAT, including some units for work force, appears to be in the neighborhood of Rs 800 per square meter. The cost of individual staff houses at agricultural universities in southern India (Tamil Nadu) is around Rs 480 per square meter.

18. The ICRISAT estimate of its requirements for equipment (presumably including furniture), at 1973 prices, is about \$3.1 million.



This compares with an outlay at CIAT, the most recently completed center, of about \$2.6 million at 1973 prices. The ICRISAT management and Governing Board no doubt will proceed carefully and economically with the detailed planning of equipment purchases; and the donors may wish to suggest that the Governing Board and the management take special measures for evaluating the equipment needs of the Institute.

19. ICRISAT's plan for laboratory buildings seems more than adequate. CIAT, with a roughly comparable program and a larger number of senior scientists (about 40 as against 36 planned for ICRISAT), uses only about 60 per cent as much space as is planned by ICRISAT. IITA has about as much laboratory space as is planned for ICRISAT, and estimates that it can serve 50-52 senior scientists. Study could well be given to the possibility of eliminating one of ICRISAT's three planned laboratory buildings.

20. A dining center is planned, in view of the lack of any suitable facilities nearby. Spaces would be provided on two floors, each with room for about 100 occupants; one floor is for full-scale meals, the other is for snacks. This is about twice the accommodation offered by Centers of comparable size; and a reduction of these facilities (although not necessarily by half) would not interfere with the effectiveness of the Institute.

21. ICRISAT's plans include staff houses for 21 of its projected senior staff of 36 and houses for 36 of its support staff. Among the Centers, IITA and IRRI provide housing for senior and support staff. CIP, in an urban location, does not. Neither CIAT nor CIMMYT, both of which are considerably further from urban centers than ICRISAT, provide housing for

senior or support staff. Reasonable housing does not appear to be exceptionally difficult to find in Hyderabad; most of the support staff, moreover, is intended to be drawn from India, and presumably would not find it uncongenial to live in the town. The question may therefore be asked whether staff housing at ICRISAT is justifiable and, if so, whether it is needed on the scale proposed.

#### IV.

22. Apart from matters of suitability and economy another set of considerations arises from a comparison between the costs of the ICRISAT plant and the amount of funds likely to be available for financing it. The Executive Secretariat believes that the funds available may fall considerably short, especially when the necessity of meeting the Institute's running costs also is taken into account.

23. In the original proposal for ICRISAT, prepared in 1971, capital costs were estimated, very approximately, to fall between \$10 million and \$12.5 million. After the establishment of ICRISAT, a further estimate was prepared which amounted to \$13.4 million, to be disbursed in the period 1972-1977.

24. In the summer of 1973, ICRISAT revised its cost estimates to reflect rising prices. The estimates were raised from \$13.4 million to \$16.4 million. Subtracting amounts already spent in 1972 and intended to be spent in 1973, ICRISAT estimated its capital costs for 1974-1977 at \$14.5 million, including allowance for contingencies. Net of contingencies, costs for the four years were put at \$13.6 million, plus an



allowance of about \$1 million for contingencies. ICRISAT's breakdown of these figures, as of January 1974, is given in Appendix II.

25. In addition, further thought was given to the implication of rising prices for ICRISAT's operating budget. If inflation were to affect that budget at a rate of 7% a year, the Institute calculates, its running costs for 1974-77 would rise from previous estimates of \$14.5 million to \$16.15 million.

26. The experience of the World Bank with construction projects in many countries, including India, over a long period of years, indicates that a considerably higher allowance needs to be made for contingencies in executing the capital plan, to cover both price rises and unforeseen physical circumstances. In 1973, construction costs in India rose by almost 25 per cent.

27. Recent visits by Bank architects to Secunderabad, the site of ICRISAT, and to the neighboring State of Tamil Nadu, confirm the advisability of allowing for further rises in construction costs in India on the order of 12% in 1974, 10% in 1975 and 8% in both 1976 and 1977. In addition, the Bank's standard practice allows for physical contingencies at the rate of 10% a year. Allowances at somewhat lower rates (descending from 9% in 1974) are made for the costs of equipment, most of which ICRISAT will import from abroad. (The Bank's figures are shown in Appendix III. Close estimates on which to base them have not been available, but they can be taken as illustrating orders of magnitude.)

28. The Director of ICRISAT believes that the Bank contingency allowances are too high. He observes that the Institute will be somewhat shielded

from price rises by the following factors: (a) much of the work done on the development of ICRISAT's site will be done by the Institute itself rather than by outside contractors; (b) the prices of important building materials are effectively controlled in India; and (c) ICRISAT already has procured and stockpiled a large quantity of steel, and has reserved additional quantities of steel and cement.

29. When the Bank's figures are used, the allowances for contingencies rise to a level of about \$5.5 million; and the estimates of the total cost of the project rise to \$19.5 million, or about \$5 million over the ICRISAT estimate. When running costs are added, the estimate of total funds to be found for the Institute in 1974-77 rises to more than \$35.5 million.

30. On the basis of information received from donors at their October 1973 meeting and subsequently, the Consultative Group Secretariat believes that the range of funds that can be expected from donors in 1974-77 is between about \$30.5 million and \$34.5 million. The implication, if the upper range of contingency figures is used, is that funds may fall as much as \$5 million short of meeting expenditures.

31. On the basis of the most conservative assumption about available funds, the year-by-year situation, measured in \$ millions, would look like this:

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
Required	6.3	12.3	10.3	6.9	35.8
Available	<u>7.6</u>	<u>7.7</u>	<u>7.8</u>	<u>7.5</u>	<u>30.6</u>
Net	1.3	-4.6	-2.5	0.6	-5.2.



32. In these circumstances, donors are asked to consider whether they conclude that ICRISAT's capital and operating programs should be re-shaped and re-phased to bring estimated costs, year by year, within the scope of the finance likely to be available. If such a conclusion is reached, donors may wish to express views on expenditure plans and their possible modification. It would of course be understood that specific modifications would be left to the Governing Board and the management of the Institute to work out.

V.

33. It appears possible to develop a plan of expenditures that would enable essential work to be done and that would fall within the limits of funding. The capital plan could be in two tiers, consisting of an irreducible base of essential expenditures, topped by optional items that could be deferred or carried out according to the availability of funds. Such a plan could be reviewed and adjusted annually by ICRISAT and the donors within the normal procedures of the Consultative Group.

34. It appears to be both feasible and prudent to set the level of essential expenditures within the lower limit of funds available. For one thing, additional funds may not be forthcoming. For another, optional items postponed toward the end of 1974-1977 will, because of rising prices, cost more than originally planned and, when added to the base figure, will bring about a higher total.

35. Running costs, ICRISAT's management has felt, can be restrained, if necessary, by program adjustments. Recruiting of staff, even by established

Centers, often goes more slowly than planned. Rapid recruiting may be wasteful: the planning and supervision of the physical establishment of a new center places an extremely heavy (and generally unappreciated) burden on a Center director and his chief scientists -- to the extent of retarding the work of other staff. ICRISAT already seems to be proceeding conservatively, to keep the increase of staff in phase with other aspects of the growth of the Institute; man-hours of senior staff time in 1974, for example, will be 25% under first estimates. It may therefore be feasible to plan running costs in 1974-1977 for an amount close to (though perhaps not level with) the figure of \$14.5 million considered by donors last October.

36. In the construction program there are many elements of differing priorities. In Section II of this paper, mention already has been made of the possibility of reductions affecting equipment purchases, laboratory space, dining amenities and staff housing. Some or all of these reductions might be put on the optional list, to be made up if funds permit.

37. Three other items might be considered for optional listing, as follows:

a. Nearly a third of planned capital expenditures is for developing ICRISAT's site, including the provision of utilities and landscaping to the building campus. The item for site development includes both functional facilities and ornamental features. Some small economies were recently effected in the planning of this item (about \$10,000) but it seems likely that, in a total of about \$2.2 million, further



economies could be found without hardship. Between this item and the purchase of equipment, the possibility of saving of as much as \$0.4 million might be explored.

b. A guest house is planned to provide sleeping accommodations for senior visitors. It would have 12 single rooms and two small suites for double occupancy; and it would cost approximately \$230,000 (including contingencies on the Bank formula). In view of the availability of acceptable hotel accommodations within the Secunderabad-Hyderabad metropolitan area, this item appears to be eligible for deferral.

c. Two dormitories are planned for trainees, each with accommodations for 72, and "flatlets" are planned for married trainees. Accommodations of this kind are essential for the accomplishment of ICRISAT's mission. On the other hand, it is possible that the build-up of training programs will not be as rapid as expected, and that the construction of one dormitory could be deferred until 1978. The reduction from the estimates would be on the order of \$500,000 (including contingencies on the Bank formula).

38. Notional budgetary reductions from deferrals or deletions are shown below, in \$ thousands:

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
Running costs		650	400	500	1,550
Equipment	50	670	50	-570	200
One laboratory bldg	70	170	120	40	400
Site development	35	85	60	20	200
Guest house	40	100	70	20	230
Dining hall	10	25	20	5	60
One dormitory	85	215	150	50	500
Support housing	105	285	180	60	630
Senior housing	<u>155</u>	<u>385</u>	<u>270</u>	<u>90</u>	<u>900</u>
Total	550	2,585	1,320	215	4,670.

39. Requirements and availabilities would then compare as follows  
(in \$ millions):

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
Available	7.6	7.7	7.8	7.5	30.6
Required	<u>5.7</u>	<u>9.7</u>	<u>8.9</u>	<u>6.7</u>	<u>31.0</u>
Net	1.9	-2.0	-1.1	0.8	-0.4.

The figures would be tolerably in balance, over-all, although there would be a deficit to be solved in 1976. If availabilities reached \$32.6 million, midway between the lower and upper estimates of the Secretariat, the first three years would be roughly in balance and a sizeable upward adjustment, amounting to roughly \$1 million, could begin in 1977. If it were clear by the end of 1974 that the upper figure of availabilities (around \$34.5 million) would be reached, adjustments might begin as early as 1975.

March 25, 1974



ICRISAT BUILDING PROGRAM

APPENDIX - I

(EXTRACTED FROM ARCHITECT'S DESIGN DEVELOPMENT REPORT - JULY 1973)

No.	Type of Facility	Gross Area of Construc- -tion (sq. ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug.1973 (Rupees)	Remarks
<u>A. INSTITUTIONAL BUILDINGS:</u>						
200	Administration	24,570		2,150,000		
203	Library	13,850		1,060,000		Includes 1560 sq.ft. future stack area & 5840 sq.ft. stilt area
202	Auditorium	6,410		380,000		
307	Training Office	2,700		230,000		
300	Laboratory I	22,260		2,850,000		
301	Laboratory II	22,260		2,850,000		
302	Laboratory III	22,260		2,315,000		
312	Plant Quarantine			(500,000) Deleted		Omitted from Phases (I&II) Can be accommodated in buildings constructed for temporary operational head -quarters with limited modifications

No.	Type of Facility	Gross Area of Construc- -tion (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's	Estimated cost	Owner's	Remarks
				(from Design Dev. Report)	July 1973	Revisions Subsequent to Aug.1973	
				(Rupees)	(Rupees)	(Rupees)	
<u>A. Institutional Buildings(Cont'd)</u>							
308	Crop Work Area	29,860	31,583	1,430,000	1,513,000		Covered work area increased in size.
401	Farm Machinery, Maintenance & Stores	48,640	52,640	2,540,000	2,749,000		Shop increased in size.
400	Mechanical, Electrical Services	9,470		610,000			
309	Radio Isotope Lab, Plant propagation, Soil Storage	21,150		1,540,000			
206- 207- 208	Chemical Store & Warehouse	10,570		400,000			
205	Canteen	9,620		740,000			
209	Laundry	2,080		130,000			
310- 311	Greenhouses	24,000		1,314,000			
500- 501	Dormitories	63,000		5,630,000			Includes 12,900 sq.ft. of stilt area.
502	Flatlets	14,760		1,430,000			Includes 3,700 sq.ft. of stilt area
700	Guest House/Recreation Centre	17,500	15,500	1,500,000	1,329,000		Includes 12 guest rooms 2 suits - reduced in size.
204	Dining Centre	18,580		1,375,000			
Sub-Total:				30,964,000	31,085,000		



No.	Type of Facility	Gross Area of Construc- -tion (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug.1973 (Rupees)	Remarks
<u>B. HOUSING:</u>						
600	Director's Residence	5,950	4,500	560,000	400,000	Being reduced in size.
601-	International staff housing					
602-	20 units	59,620	45,000	6,240,000	4,710,000	Reduced in size
603	(4, 3 & 2 bedrooms)					
610-	Essential Support staff					Specs. (and unit costs)
611-	housing - 36 units	56,100		5,950,000	3,366,000	reduced.
612	(3 and 2 bedrooms)					
620/	Other support staff	17,600		1,200,000	704,000	Specs. (and unit costs)
621	housing - 32 units					reduced.
	Sub-Total:			13,950,000	9,180,000	
<u>C. AIR-CONDITIONING INSTALLATION:</u>						
	Air-Conditioned Space	225,000				
	Evaporative cooling space	175,000	118,000	10,200,000	10,000,000	Evaporative cooling elimi- nated from essential support staff housing.
	Sub-Total:			10,200,000	10,000,000	
<u>D. RECREATIONAL FACILITIES:</u>						
	Swimming Pool & Wading Pool			680,000		
	Tennis & Squash Courts			680,000		
	Sub-Total:			1,360,000	1,360,000	

No.	Type of Facility	Gross Area of Construction (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug. 1973 (Rupees)	Remarks
<u>E. CAMPUS SITE DEVELOPMENT &amp; EXTERNAL WORKS:</u>						
	Campus Site Development			18,130,000	18,000,000	Gate house, Sewage treatment plant, fire hydrants, & external lighting decreased in scope and size.
	Generators (including Elec./ Civil work)			<u>1,870,000</u>	<u>1,870,000</u>	
	Sub-Total:			<u>20,000,000</u>	<u>19,870,000</u>	
	TOTAL (A+B+C+D+E):		Rs.	<u>76,474,000</u>	<u>71,495,000</u>	
	TOTAL ( " ):		US \$	10,475,890	9,793,836	(@Rs. 7.30 per US \$ 1.00)
	Additional for Adequate Specification		Rs.	6,700,000	5,100,000	
			US \$	<u>447,308</u>	<u>698,630</u>	(@Rs. 7.30 per US \$ 1.00)
	TOTAL:		US \$	11,393,698	10,492,466	(@Rs. 7.30 per US \$ 1.00)
			US \$	<u>10,081,697</u>	<u>9,284,242</u>	(@Rs. 8.25 per US \$ 1.00)
(Plant quarantine deleted)						



ICRISAT CAPITAL BUDGET PROJECTIONS, JANUARY 1974<sup>1/</sup>

APPENDIX - II

Category of Work	U.S. Dollars in thousands <sup>2/</sup>						Total Estimated Cost
	Actuals		Estimates				
	1972	1973	1974	1975	1976	1977	
A. Site Development (by ICRISAT)	105	223	82	34	15	12	471
B. Campus External Work (Contract)	-	-	446	779	365	486	2,076
C. Building Construction (Contract)	-	427	1,346	3,246	1,856	1,197	8,090
D. Equipment	53	874	740	1,386	552	138	3,743
E. Consultant's Fees and Landscaping	-	242	184	185	412	42	1,065
F. Contingencies	-	-	202	352	300	125	979
TOTAL:	158	1,766	3,000	6,000	3,500	2,000	16,424

<sup>1/</sup> Prior to Mr. K. Thint's visit, Hyderabad.<sup>2/</sup> Based on Rs. 7.30 per U.S. \$ 1.00.

ICRISAT CAPITAL BUDGET, INCLUDING CONTINGENCIES  
ON WORLD BANK FORMULA

<u>Item</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total Estimate</u>
Site Development	82	34	15	12	143
Campus Development	446	779	365	486	2,076
Building Construction	1,144	3,434	2,288	763	7,629
Consultant Fees & Landscaping	<u>181</u>	<u>362</u>	<u>272</u>	<u>90</u>	<u>905</u>
Subtotal	1,760	4,853	3,257	1,095	10,965
Physical contingencies	220	438	329	110	1,097
Price contingencies	<u>775</u>	<u>1,541</u>	<u>1,158</u>	<u>386</u>	<u>3,860</u>
Subtotal	2,755	6,832	4,744	1,581	15,922
Equipment	774	1,394	774	156	3,098
Physical contingencies	39	68	39	8	154
Price contingencies	<u>98</u>	<u>155</u>	<u>98</u>	<u>39</u>	<u>390</u>
Subtotal	911	1,617	911	203	3,642
Grand total	3,666	8,449	5,655	1,784	19,554.





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

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

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

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

March 25, 1974

Dear Harold,

I wish to acknowledge receipt of your letter of March 13, 1974. I do not wish to get into any argument with you with reference to whether or not Herb Albrecht needs the laboratory space he has or not. At the same time, I am aware that he has two dormitories already completed or in the process of being completed the last time I was there. It is my impression that he intended to have quite a substantial number of scientist trainees in his program in the future which he does not have now. When he gets these into the picture it would not be surprising to me if he may be asking the Consultative Group to provide even more laboratory space than he now has. In any event, whether or not his space is more than he now needs, I am thoroughly convinced that ICRISAT will need the space it has now planned by the time it gets fully staffed and programed if it is to meet the obligations which I feel it must most urgently meet. As a matter of fact, we have provided in the plan for quite a substantial expansion over and above this without any major change in the basic interrelationships of functions, and I think the flexibility we are building into our physical plant planning is a very desirable and important feature. I feel it would be very shortsighted in light of the tremendously important and urgent problem we have ahead if we cannot develop a physical plant which is somewhere near reasonably adequate for the scientific program we need desperately to mount.

We are developing laboratory facilities now on a tentative basis and as we are building up our staff we are going to be very sorely pressed to provide even the minimum amount of laboratory space on an ad hoc basis with all that we can possibly squeeze out of the local community until we have these buildings in place and ready for use.

I shall look forward to seeing you in Washington the first week in April.

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

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Director

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GRAVES REURCAB MARCH TWENTYONE TENDERS BEING POSTPONED STOP  
UPDATING INFORMATION RECENTLY SUPPLIED ON ITEMS REQUESTED URCAB  
MARCH EIGHT STOP WILL RELAY BY TELEPHONE FROM NEWYORK MORNING  
APRIL ONE

CUMMINGSKRISAT SECUNDERABAD

COL WASHINGTONDC-2043

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**OUTGOING WIRE**

TO: TREITZ  
BMZ  
BONN

DATE: MARCH 21, 1974

CLASS OF  
SERVICE: TELEX NO. 8869452

*Rca*

COUNTRY: GERMANY

TEXT:  
Cable No.:

I URGE YOU TO CONSIDER ONCE MORE THE QUESTION OF REPRESENTATION AT THE APRIL MEETING ON (ICRISAT.) BELIEVE GERMAN PARTICIPATION HIGHLY DESIRABLE FOR FOLLOWING REASONS.

NUMBER ONE. DONORS WILL WISH TO ACT PRUDENTLY AND TO CONSIDER THE CONSTRUCTION PROGRAM OF ICRISAT JUST AS THEY CONSIDER ITS RESEARCH AND TRAINING PROGRAM. THEY WILL WISH TO SATISFY THEMSELVES AND THEIR BUDGETARY AND PARLIAMENTARY AUTHORITIES THAT PLANS ARE ADEQUATE FOR THE PURPOSE OF THE INSTITUTION AND REPRESENT A JUSTIFIABLE AND ECONOMICAL USE OF DONOR FUNDS.

NUMBER TWO. ICRISAT IS ONLY ONE OF SEVERAL CASES IN WHICH DONORS WILL BE ASKED TO DISCHARGE THIS RESPONSIBILITY WITH REGARD TO CAPITAL PLANNING. IN FORESEEABLE FUTURE SIMILAR PROPOSALS WILL COME FROM ILRAD, ILCA AND PERHAPS A MIDDLE EAST CENTER. ICRISAT THEREFORE IS AN IMPORTANT PILOT CASE WHICH WILL SET PRECEDENTS FOR THE SIZE AND MATERIAL STANDARDS OF OTHER NEW CENTERS.

NUMBER THREE. FINANCING **NEEDED** BY ICRISAT IS SUFFICIENTLY LARGE THAT IT WILL HAVE A SIZEABLE IMPACT ON FUNDS AVAILABLE FOR THE WHOLE RESEARCH NETWORK INCLUDING BOTH NEW AND EXISTING CENTERS. DECIDING ON THE LEVEL OF

(CONTINUED)

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AUTHORIZED BY:

NAME

DEPT.

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

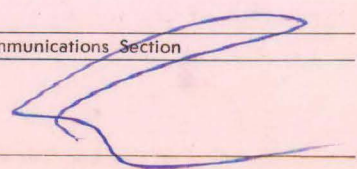
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DATE: MARCH 21, 1974  
 CLASS OF SERVICE: TELETYPE NO. 888452  
 COUNTRY: GERMANY  
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TO: TREITZ  
BMZ  
BONN

DATE: MARCH 21, 1974

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COUNTRY: GERMANY

PAGE TWO

TEXT: EXPENDITURES FOR ICRISAT IS THEREFORE AN ESSENTIAL TASK FOR DONORS.  
Cable No.: SUCH TASKS

INDIVIDUAL BOARDS OF TRUSTEES CANNOT UNDERTAKE/~~XXXXXXXX~~ UNILATERALLY.

BOARDS MUST BE ABLE TO BASE THEIR DECISIONS ON GUIDELINES AND FINANCIAL  
DIMENSIONS AGREED ON BY DONORS.

NUMBER FOUR. IN THE CASE OF ICRISAT THERE ARE A NUMBER OF QUESTIONS  
OF PRINCIPLE ON WHICH DONORS VIEWS ARE NEEDED. ONE IS THE STANDARD OF  
CONSTRUCTION WHICH DONORS ARE WILLING TO SUPPORT IN TERMS OF COST PER SQUARE  
METER. THE DETERMINATION OF THIS QUESTION ALONE MAY MAKE A DIFFERENCE OF  
OVER THREE MILLION DEUTSCHE MARK IN THE COST OF THE INSTITUTE. THERE ARE  
OTHER IMPORTANT QUESTIONS OF THIS KIND.

NUMBER FIVE. OUR BEST ESTIMATE IS THAT COST OF ICRISAT AS PLANNED  
WILL EXCEED FUNDS TO BE EXPECTED FROM DONORS. WE THEREFORE BELIEVE THAT DONORS  
MUST CONSIDER HOW THE PROGRAM CAN BE SHAPED AND TIMED TO BE CARRIED OUT WITHIN  
FUNDS AVAILABLE. THIS IS THE MAIN BUSINESS OF APRIL MEETING. IT IS NOT  
REPEAT NOT THE PURPOSE OF THE MEETING TO SEEK INCREASE OF DONOR CONTRIBUTIONS.

NUMBER SIX. DATE OF APRIL MEETING WAS FIXED IN CONSULTATION WITH THE  
ICRISAT MANAGEMENT. IT WAS CHOSEN TO FIT INTO THE SERIES OF STEPS BEING TAKEN

**NOT TO BE TRANSMITTED**

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: TRITTS  
BNC  
BOMB

DATE: MARCH 21, 1974

CLASS OF SERVICE: TELEX NO. 888943Z

COUNTRY: GERMANY

PAGE TWO

TEXT: Cable No.:

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DIMENSIONS AGREED ON BY DONORS.

NUMBER FOUR. IN THE CASE OF ICRISAT THERE ARE A NUMBER OF QUESTIONS

OF PRINCIPLES ON WHICH DONORS VIEWS ARE NEEDED. ONE IS THE STANDARD OF

CONSTRUCTION WHICH DONORS ARE WILLING TO SUPPORT IN TERMS OF COST PER SQUARE

METER. THE DETERMINATION OF THIS QUESTION ALONE MAY MAKE A DIFFERENCE OF

OVER THREE MILLION BRUSCHE MARK IN THE COST OF THE INSTITUTE. THESE ARE

OTHER IMPORTANT QUESTIONS OF THIS KIND.

NUMBER FIVE. OUR BEST ESTIMATE IS THAT COST OF ICRISAT AS PLANNED

WILL EXCEED FUNDS TO BE EXPECTED FROM DONORS. WE THEREFORE BELIEVE THAT DONORS

MUST CONSIDER HOW THE PROGRAM CAN BE SHAPED AND TIMED TO BE CARRIED OUT WITHIN

FUNDS AVAILABLE. THIS IS THE MAIN BUSINESS OF APRIL MEETING. IT IS NOT

REPEAT NOT THE PURPOSE OF THE MEETING TO SEEK INCREASE OF DONOR CONTRIBUTIONS.

NUMBER SIX. DATE OF APRIL MEETING WAS FIXED IN CONSULTATION WITH THE

ICRISAT MANAGEMENT. IT WAS CHOSEN TO FIT INTO THE SERIES OF STEPS BEING TAKEN

NOT TO BE TRANSMITTED

(CONTINUED)

AUTHORIZED BY:

NAME

DEPT

SIGNATURE

REFERENCE:

COMMUNICATIONS  
MAR 21 4 40 PM 1974

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(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch

For Use by Communications Section

**OUTGOING WIRE**

TO: TREITZ  
BMZ  
BONN

DATE: MARCH 21, 1974

CLASS OF  
SERVICE: TELEX NO. 8869452

COUNTRY: GERMANY

PAGE THREE

TEXT: BY ICRISAT TOWARD THE EVALUATION OF BIDS AND THE AWARD OF CONSTRUCTION  
Cable No.: CONTRACTS. SINCE MEETING OF ICRISAT GOVERNING BOARD IS INTENDED TO  
APPROVE FINAL CONTRACT AWARDS DONORS MUST CONSIDER GUIDELINES AND  
EXPENDITURE LEVELS BEFORE THEN. POSTPONEMENT OF DONORS MEETING TO  
JULY WOULD DELAY INITIATION OF CONSTRUCTION OF THE CENTER BY AT LEAST  
SEVERAL MONTHS.

NUMBER SEVEN. I APPRECIATE THE DIFFICULTY AND INCONVENIENCE OF  
HAVING A REPRESENTATIVE COME TO WASHINGTON FOR ONE OR TWO DAYS.  
NEVERTHELESS I BELIEVE IT VERY DESIRABLE FEDERAL REPUBLIC BE REPRESENTED,  
ESPECIALLY SINCE IT IS AN IMPORTANT SOURCE OF ICRISAT FINANCING AND  
A LEADING PARTICIPANT IN CONSULTATIVE GROUP SYSTEM.

BAUM

CHAIRMAN CONSULTATIVE GROUP

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

*Harold N. Graves, Jr.*

NAME

~~WARREN C. BAUM~~

DEPT.

~~WARREN C. BAUM~~  
Harold N. Graves, Jr.  
Agriculture and Rural Development

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

HGraves/Warren C. Baum:apm

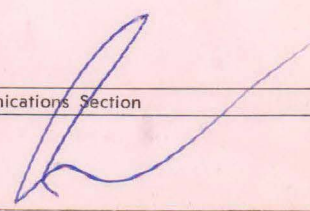
CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Kiermayr  
Mr. Yudelman

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**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: 



OUTGOING WIRE

TO: GERMANY  
 FROM: BIRMINGHAM  
 DATE: MARCH 21, 1974  
 CLASS OF SERVICE: TELETYPE NO. 8889432  
 PAGE THREE

TEXT: Cable No. BY ICRISAT TOWARD THE EVALUATION OF BIDS AND THE AWARD OF CONSTRUCTION CONTRACTS. SINCE MEETING OF ICRISAT GOVERNING BOARD IS INTENDED TO APPROVE FINAL CONTRACT AWARDS DONORS MUST CONSIDER GUIDELINES AND EXPENDITURE LEVELS BEFORE THEM. POSTPONEMENT OF DONORS MEETING TO JULY WOULD DELAY INITIATION OF CONSTRUCTION OF THE CENTER BY AT LEAST SEVERAL MONTHS.

MEMBER SEVEN. I APPRECIATE THE DIFFICULTY AND INCONVENIENCE OF HAVING A REPRESENTATIVE COME TO WASHINGTON FOR ONE OR TWO DAYS. HOWEVER, I BELIEVE IT VERY DESIRABLE THAT REPUBLIC BE REPRESENTED, ESPECIALLY SINCE IT IS AN IMPORTANT SOURCE OF ICRISAT FINANCING AND A LEADING PARTICIPANT IN CONSULTATIVE GROUP SYSTEM.

BAHM  
 CHAIRMAN CONSULTATIVE GROUP

NOT TO BE TRANSMITTED

CLEARANCE AND COPY DISTRIBUTION:

cc: Mr. Kiersey  
Mr. Yeheman

COMMUNICATIONS  
MARCH 21 4 40 PM 1974

*Handwritten signature*

Harold M. Graves, Jr.  
Agriculture and Rural Development

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(IMPORTANT: See Secretariat Guide for preparing form)

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C3a

Mr. Baum, Mr. Yudelman

March 20, 1974

Harold Graves *Graves*

April 4 Meeting on ICRISAT

A message has come through the German Executive Director's Office (by telephone) that Germany will not be represented at the April meeting on ICRISAT. The message says that in the opinion of the Ministry of Economic Cooperation it would be preferable to hold such a meeting at the time of International Centers Week, after the ICRISAT Governing Board meeting in May.

I'll draft a message in reply. It presumably should be for the signature of Mr. Baum.

HG:mcj



43a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: MARCH 20, 1974

CLASS OF  
SERVICE: FULL RATE

RCA

COUNTRY: INDIA

TEXT:  
Cable No.:

WOULD APPRECIATE YOUR CABLED ADVICE WHETHER INFORMATION REQUESTED  
MY TELEGRAM OF MARCH 8 IS NOW AVAILABLE AND WHEN EYE MAY EXPECT TO  
RECEIVE IT. IF INVITATIONS TO TENDER HAVE NOT BEEN ISSUED WARREN BAUM  
SUGGESTS YOU CONSIDER DELAY UNTIL AFTER APRIL FOUR MEETING IN ORDER TO  
ACCOMMODATE ANY MODIFICATIONS AGREED ON THEN. EVEN THOUGH THIS MIGHT  
DELAY YOUR MAY MEETING BY SOME WEEKS IT MIGHT SAVE TIME IN THE END.  
REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

HGraves : apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

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Checked for Dispatch: *[Signature]*

OUTGOING WIRE

TO:

CUMINGS  
CRIST  
SECUNDERABAD

DATE: MARCH 20, 1974

CLASS OF

SERVICE: FULL RATE

COUNTRY: INDIA

TEXT:  
Cable No.:

WOULD APPRECIATE YOUR CALLED ADVISE WHETHER INFORMATION REQUESTED  
MY TELEGRAM OF MARCH 8 IS NOW AVAILABLE AND WHEN EYE MAY EXPECT TO  
RECEIVE IT. IF INVITATIONS TO TENDER HAVE NOT BEEN ISSUED WARREN BAUM  
SUGGESTS YOU CONSIDER DELAY UNTIL AFTER APRIL YOUR MEETING IN ORDER TO  
ACCOMMODATE ANY MODIFICATIONS AGREED ON THEM. EVEN THOUGH THIS MIGHT  
DELAY YOUR MAY MEETING BY SOME WEEKS IT MIGHT SAVE TIME IN THE END.

REGARDS.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT

Agriculture & Rural Development

SIGNATURE

*Harold N. Graves, Jr.*  
SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

REFERENCE

Graves: apm

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MAR 20 5 1 PM '74  
COMMUNICATIONS  
SECTION





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

639

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

March 19, 1974

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

Mr. Harold Graves  
I.B.R.D.  
1818 H Street, N.W.  
Washington, D.C. 20433

Dear Harold:

Two reasons this week to think of you. One, the proposed budget document; second, my mother sent a clipping of The Pike Press reporting our meeting here.

I trust your mother saw it and told you. If you didn't get a clipping, here's the text:

"Two men had just met and were chatting together in the home of their American host in Hyderabad, India. One asked the customary question that comes out when two Americans meet in a far off land:


"Where are you from in the States?"  
"Iowa, but I grew up in Illinois."  
"What part?"  
"Downstate."  
"Narrow it some more."  
"South of Quincy."  
"Still more."  
"Pike county."  
"My mother lives in Chambersburg!"

"The man with family ties to Chambersburg was Harold Graves, now of Washington, D.C., a staff member of the World Bank. He was in India visiting a research organization in which the World Bank has interests. The other was Bob Kern, serving in that research organization as information officer.

"The conversation that followed touched many bases of common knowledge and persons known to both.

"Perhaps the world is still comprehensible when two persons chance to meet and find common interests and memories of another spot even though it's ten-and-a-half time zones away."

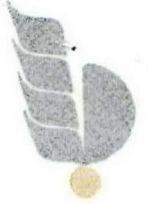
Sincerely yours,

  
K. Robert Kern  
Information Officer

KRK/tak

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1974 MAR 28 PM 3:10  
COMMUNICATIONS

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



Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

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

March 19, 1974

Mr. Harold Graves  
I.B.R.D.  
1818 H Street, N.W.  
Washington, D.C. 20433

Dear Harold:

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I trust your mother saw it and told you. If you didn't get a clipping, here's the text:

"Two men had just met and were chatting together in the home of their American host in Hyderabad, India. One asked the customary question that comes out when two Americans meet in a far off land:

"Where are you from in the States?"  
"I grew up in Illinois."  
"What part?"  
"Swanstate."  
"How far is some more."  
"South of Quincy."  
"Till more."  
"Pike county."  
"My mother lives in Chambersburg!"

"The man with family ties to Chambersburg was Harold Graves, now of Washington, D.C., a staff member of the World Bank. He was in India visiting a research organization in which the World Bank has interests. The other was Bob Kern, serving in that research organization as information officer.

"The conversation that followed touched many bases of common knowledge and persons known to both.

"Perhaps the world is still comprehensible when two persons chance to meet and find common interests and memories of another spot even though it's ten-and-a-half time zones away."

Sincerely yours

R. Robert Kern  
Information Officer

KRK/tak

1974 MAR 28 PM 3:10

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COMMUNICATIONS SECTION



*yellow* *93a*

TO: Mr. Harold Graves

March 18, 1974

FROM: Kin Maung Thint

SUBJECT: ICRISAT - Estimated Project Cost and Contingency Calculations

As requested, I have reviewed the contingency figures in my report of January 31, 1974. In order to be consistent with recent Bank guidelines on contingency calculations, I have revised my earlier estimates to follow the "Interim Guidelines on Treatment of Project Cost Increases" issued by Mr. Warren Baum for use in Bank/IDA projects. The general price contingency allowances recommended in the guidelines are as follows (annual percentage rates):

	<u>Equipment</u>	<u>Civil Works</u>
1974	9	12
1975	7	10
1976-80	5	8

These price contingencies represent our best judgement of the expected increases in project costs on account of normal price increases. In the absence of better estimates I have used these contingency figures for the ICRISAT project in the calculations below.

I. Civil Works and Professional Fees

<u>Category</u>	<u>Estimated Cost</u>	<u>Estimated Expenditures</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
A. Civil Works & Prof. Fees	11,765 <sup>1/</sup>	1,880	5,213	3,497	1,175
B. Physical Contingency (10%)	<u>1,177</u>	<u>188</u>	<u>521</u>	<u>350</u>	<u>118</u>
Total (A + B)	<u>12,942</u>	<u>2,068</u>	<u>5,734</u>	<u>3,847</u>	<u>1,293</u>
	<u>Estimated Cost</u>	<u>Estimated Unexpended Balance at Year-End</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Total (A + B)	12,942	10,874	5,140	1,293	-
Price Increase Factor	-	0.12 (12%)	0.23 (10%)	0.34 (8%)	-
C. Price Contingency (22%)	<u>2,926</u>	<u>1,304</u>	<u>1,182</u>	<u>440</u>	<u>-</u>
Total (A + B) + C	<u>15,868</u>	<u>12,178</u>	<u>6,322</u>	<u>1,733</u>	<u>-</u>

<sup>1/</sup> Estimated figure in Mr. Cummings' letter of February 16, 1974, is US\$11.6 million

II. Equipment

<u>Category of Work</u>	<u>Estimated Cost</u>	<u>Estimated Expenditures</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
D. Equipment	3,098	774	1,394	774	156
E. Physical Contingency (5%)	<u>155</u>	<u>39</u>	<u>69</u>	<u>39</u>	<u>8</u>
Total (D + E)	<u>3,253</u>	<u>813</u>	<u>1,463</u>	<u>813</u>	<u>164</u>

	<u>Estimated Cost</u>	<u>Estimated Unexpended Balance at Year-End</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Total (D + E)	3,253	2,440	977	164	-
Price Increase Factor		0.9 (9%)	0.17 (7%)	0.22 (5%)	-
F. Price Contingency (12%)	<u>422</u>	<u>219</u>	<u>166</u>	<u>36</u>	<u>-</u>
Total (D + E) + F	<u>3,675</u>	<u>2,659</u>	<u>1,143</u>	<u>200</u>	<u>-</u>

III. Total Estimated Project Cost

<u>Category</u>	<u>Estimated Cost</u>	<u>Estimated Expenditures</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
I. (A + B) + C	15,868	3,372	6,916	4,287	1,293
II. (D + E) + F	<u>3,675</u>	<u>1,032</u>	<u>1,629</u>	<u>849</u>	<u>164</u>
Total I + II	<u>19,543</u>	<u>4,404</u>	<u>8,645</u>	<u>5,136</u>	<u>1,457</u>

The total estimated figures in paragraph 10 of my report dated January 31, 1974, are shown below.

	<u>Estimated Cost</u>	<u>Estimated Expenditures</u>			
		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Total	20,725	3,854	8,957	6,004	1,910

You will note that there has been a reduction in the total amount of the estimated project cost by about US\$1.182 million, and as a result some differences in the amounts of yearly expenditures have also occurred. The difference in the amount is primarily due to the methodology used in the contingency



March 18, 1974

calculations above. The CPS method does not take into account price escalation for amounts to be incurred in a certain year, but only for the unexpended balance; this, in my view, results in an underestimation of contingency allowance. For example, under I above, US\$2,068 million in 1974, US\$5,734 million in 1975, etc., are not subject to price increases of 12%, 10% etc., respectively for those years; at least part of these amounts should be adjusted for price increase at the end of the year. If the price escalation on these amounts is taken into consideration - say affecting half of the amounts to be expended in each year - then the total contingency amount would increase by about US\$1.8 million.

As mentioned earlier in my report, until we receive more definitive estimates from ICRISAT's architects, as requested in our cable (March 6, 1974) to Mr. Cummings, I do not think it would be meaningful to determine ICRISAT's capital budget requirements on the basis of the above figures which are based on the architects' preliminary estimates.

I hope that you find the above calculations useful in clarifying any doubts you may have had. Should you require any information on the price contingency percentages or methodology, I would suggest you refer to the CPS guidelines mentioned above.

cc: Messrs. Baum, Lithgow, Yudelman, Cheek

KMThint:ts

43a

March 16, 1974

Dear Ralph:

With this letter, I am sending you a partial draft of an internal paper on ICRISAT. We will be considering it here next week, and on the basis of that consideration, will be providing documentation to donors for the April 4 meeting. I would be glad to have a cable from you on any part of the paper which needs factual correction or on which you would like to comment. I have not included the attachments to the draft. Annex I would be the tables (yours and Thint's) shown in paragraph 10 of Thint's report. The other attachment consists of my guesses about what donors will do, and includes a suggestion that IDA be prepared to make very substantial contributions for the years 1975-77.

Let me caution you that all this is rough draft, entirely and thoroughly subject to change.

Hurriedly,

Harold Graves

Attachment

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16  
India

*Thint*  
HG:mcj



93a

Mr. Warren C. Baum

March 15, 1974

Bruce M. Cheek *g*

ICRISAT -- Luncheon for Subcommittee

You will be chairing the meeting of the Subcommittee of ICRISAT donors here in the Bank on April 4-5. Eleven donor agencies have been invited to attend. Harold Graves and I hope you will agree to giving a lunch for the group on Thursday, the 4th. If so, I will arrange a private room for up to twenty, including the donors, Dr. Cummings and his colleagues, and some Bank/Secretariat staff.

*g*

BMC:mcj

43a

Mr. Thint

March 15, 1974

Harold Graves

ICRISAT -- Contingency Calculations

I'm hoping that you will soon be able to find the time to look again at your contingency calculations on the capital budget of ICRISAT and explain them to me. In the meantime, I have done some doodling and come out with a somewhat, although not decisively, lower figure.

If I understood you correctly, your calculation for price rises on non-equipment items is 12% each year, not 12% compounded annually. You also explained that in the case of contingencies for rises in the prices of equipment, you had accepted the ICRISAT estimates. On these premises, it seems possible to estimate costs and contingencies as shown below, based on the figures at the bottom of page 2 of your memorandum of January 31. Figures are in US\$ thousands.

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
a. Total ex-Equipment	1880	5213	3497	1175	11,765
b. Physical Contingency (10%)	188	521	350	118	1,177
c. Price contingency (12% of a + b)	248	688	462	155	1,553
d. Equipment	774	1394	774	156	3,098
e. Physical contingency on equipment (5%)	39	68	39	8	154
f. ICRISAT contingency on equipment	98	155	98	39	390
<b>TOTAL</b>	<b>3,227</b>	<b>8,039</b>	<b>5,219</b>	<b>1,651</b>	<b>18,137</b>

*Handwritten initials*

HGraves:apm

cc: Dr. Cummings  
Mr. Lithgow





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

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

March 14, 1974

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

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

Dear Harold :

I wish to make reference to my letter of January 21, 1974 addressed to Dr. Klaus Lampe with copy to you, indicating that the Nominating Committee would wish to inform the Consultative Group that, subject to his willingness to serve, it would be pleased if he could be asked to serve for a full three year additional term - 1974-77 on the ICRISAT's Governing Board. I now wish to advise you that Dr. Lampe has indicated his willingness to serve (copy of his letter enclosed) for another term on the Governing Board, if this is the desire of the Consultative Group and the Governing Board. I would appreciate it if you will take this under consideration and initiate whatever steps that are necessary in this connection.

With best regards,

Very truly yours,

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

cc : Dr. C. F. Bentley

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COMMUNICATIONS  
15:30 PM 15/03/74

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



Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

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

March 14, 1974

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

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With best regards,

Very truly yours,

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

SECTION  
COMMUNICATIONS  
1973 MAR 22 PM 3:12

cc : Dr. C. F. Bentley

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# Bundesstelle für Entwicklungshilfe



Bundesstelle für Entwicklungshilfe, 6 Frankfurt/M. 1, Postf. 5091

6000 Frankfurt/Main 1  
Fellnerstraße 7/9  
Fernsprecher 15621  
Durchwahl: 1562

Fernschreiber  
Sammelnummer 41 4 001  
Telegrammadresse  
BUEFENT-Frankfurt/Main

Dr. Ralph Cummings  
International Crops Research  
Institute for the Semi-Arid  
Tropics (ICRISAT)

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

26 FEB 1974

*Post*

Ihr Zeichen

Ihre Nachricht vom

Unser Zeichen

Datum

III Dr.L./Hd.

18.2.1974

Dear Mr. Cummings,

Thank you very much for your letter datde 21st January 1974 and please accept my apologies for not replying earlier as I was very heavily committed through my office.

I am pleased that the Nominating Committee would like to nominate me for a second term as a Board Member of the Icrisat.

On principle I am quite agreeable to a further participation on the condition that also the Board itself is interested in my continued participation.

Highest Regards,

Yours faithfully,



43a

March 13, 1974

Dear Ralph:

Thank you so much for your cable, confirming your availability for a meeting in Washington on April 4 and 5. Before you receive this letter, I hope, you will have had a telegram from me, making some simple suggestions about the kind of presentation that might be helpful at our meeting.

In the meantime, I wanted to let you know that Herb Albrecht has been here today, and that we chatted for a minute or two about laboratory space. Herb says that his complement of senior scientists is now about 40, and that he has space in the laboratories to accommodate the work of 10 or 12 more without difficulty -- or, in other words, that he has about 30 per cent more laboratory space than he needs for 40 scientists.

I have talked at some length with Thint about your reactions to his report. I have not yet got a clear understanding of all the points he has raised, but I am not so confident as I was that it may be possible to reduce his contingency figures. I will go on talking with him about this, and, of course, will keep you informed.

It is our intention to provide donors with a memorandum about the ICRISAT situation as we see it. I will mail you a draft as quickly as possible, so that there may be some at least slim chance that you can cable comments which can be taken into account in a second draft, prior to distribution among the donors.

With warm personal regards,

Sincerely,

Harold Graves

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A.P.  
India

HGraves:apm

*Tom*

cc: Mr. Thint



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~~BHC~~  
HG  
CJ

CABLEQ

1974 MAR 10 AM 9:49

COMMUNICATIONS

ZCZC 248423 RC056 PDC0080 RME23810KNY218 BDS665/9

URWT HL INBX 027

SECUNDERABAD 27 9 1450

Distribution: Mr. Graves  
Agric. and Rural Dev.

LT

INTBAFRAD

WASHINGTONDCUSA

ATTENTION GRAVES APRIL FOUR AND FIVE SATISFACTORY OUR  
SIDE WASHINGTON MEETINGS STOP WILL APPRECIATE YOUR FURTHER SUGG-  
ESTIONS ABOUT PRESNTATIONS REGARDS

CUMMINGS CRISAT SECUNDERABAD

COL LT APRIL FOUR AND FIVE IRPT FOUR

INCOMING TELEX

LOG 102

RECEIVED

MAR 8 10 33 PM 1974

COMMUNICATIONS  
SECTION

~~BAC 3/10~~  
HG  
CJ

H

RCA0053-08

INTBAFRAD WSH

Distribution: Mr. Graves  
Agriculture & Rural Dev.

16548 NORAD N

FOR GRAVES RE YOUR TELEX OF MARCH 6 ON ICRISAT.

REGRET REPRESENTATION FROM NORAD NOT POSSIBLE BUT HAVE  
ASKED NORWEGIAN EMBASSY TO BE REPRESENTED.

7.3.74. BOG/NORAD.

☎

INTBAFRAD WSH

16548 NORAD NX☎



43a

**OUTGOING WIRE**

TO: WILHELM  
SWISS TECHNICAL COOPERATION  
BERNE

DATE: MARCH 8, 1974

CLASS OF  
SERVICE: ~~XX~~ TELEX NO. 84532176

M

COUNTRY: SWITZERLAND

TEXT:  
Cable No.:

FOLLOWING VISIT OF WORLD BANK ARCHITECT TO ICRISAT LAST MONTH  
WE BELIEVE REALISTIC ESTIMATE OF ICRISAT CONSTRUCTION AND EQUIPMENT  
COSTS IN PERIOD 1974 1977 IS ABOUT FOUR MILLION DOLLARS HIGHER THAN  
SIXTEEN AND A HALF MILLION ESTIMATE PRESENTED TO DONOR MEETING  
ATTENDED BY VON AH LAST OCTOBER. THEREFORE HIGHLY DESIRABLE ICRISAT  
DONORS SHOULD MEET AGAIN TO CONSIDER NEW SITUATION. WE PLANNING SUCH  
A MEETING IN WASHINGTON APRIL FOURTH WITH RUNOVER TO FIFTH IF  
NECESSARY AND HOPE SWITZERLAND CAN BE REPRESENTED. REGARDS

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

For Use By Communications Section

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *VO*

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO:

WILHELM  
SWISS TECHNICAL COOPERATION  
BERNE

DATE: MARCH 8, 1974

CLASS OF

SERVICE: XX TELEX NO. 84532176

COUNTRY:

SWITZERLAND

TEXT:

Cable No.:

FOLLOWING VISIT OF WORLD BANK ARCHITECT TO ICRISAT LAST MONTH  
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 ATTENDED BY VON AN LAST OCTOBER. THEREFORE HIGHLY DESIRABLE ICRISAT  
 DONORS SHOULD MEET AGAIN TO CONSIDER NEW SITUATION. WE PLANNING SUCH  
 A MEETING IN WASHINGTON APRIL FOURTH WITH RUMOVIC TO FORTH IN  
 MORGEBAY AND HOPE SWITZERLAND CAN BE REPRESENTED.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT.

Agriculture & Rural Development

SIGNATURE

(Signature of individual authorized to approve)

REFERENCE

COMMUNICATIONS  
 MAR 8 11 25 AM 1974

ORIGINAL (File Copy)

10



G3a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: MARCH 8, 1974

CLASS OF  
SERVICE: ~~KK~~ FULL RATE

FR/RCA

COUNTRY: INDIA

TEXT:  
Cable No.:

RE ICRISAT BUILDING PROGRAM WHEN ARCHITECTS ESTIMATES RECEIVED GRATEFUL YOU FORWARD FOLLOWING INFORMATION SOONEST POSSIBLE ALPHA LATEST GROSS CONSTRUCTION AREA AND COSTS BASED ON WORKING DRAWINGS AND QUANTITIES OF PROPOSED BUILDINGS ALONG LINES SHOWN IN PAGES 49 TO 57 OF DESIGN DEVELOPMENT REPORT OF JULY 1973 BUT INCLUDING PHYSICAL AND PRICE ESCALATION CONTINGENCIES WITH INDICATION OF HOW CONTINGENCIES ARE CALCULATED BETA BREAKDOWN OF CONSTRUCTION COST PER UNIT AREA OF EACH BUILDING TYPE GAMMA TOTAL ESTIMATED FURNITURE AND EQUIPMENT COSTS INCLUDING CONTINGENCIES DELTA LATEST ESTIMATE OF PROFESSIONAL FEES FOR ARCHITECTURAL AND RELATED ENGINEERING AND SUPERVISION WORK ZETA SCHEDULE OF ESTIMATED YEARLY DISBURSEMENTS BASED ON CONSTRUCTION AND PROCUREMENT PROGRAM STOP WE SUGGEST CONSULTANTS BE REQUESTED TO CALCULATE CONTINGENCIES SEPARATELY FOR LOCAL AND FOREIGN COSTS. REGARDS.

GRAVES  
INTBAFRAD

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: KMThint/HGraves:apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Kraske

For Use By Communications Section

Checked for Dispatch: *sc*



OUTGOING WIRE

MARCH 8, 1974

DATE

TO: CUMMINGS

TO:

CRISAT  
SECUNDRABAD

~~TX~~ ~~DATE~~

CLASS OF SERVICE

COUNTRY: INDIA

TEXT:

Cable No:

RE CRISAT BUILDING PROGRAM WHEN ARCHITECTS ESTIMATES RECEIVED GREATBUL YOU FORWARD FOLLOWING INFORMATION SOONEST POSSIBLE ALPHA LATEST GROSS CONSTRUCTION AREA AND COSTS BASED ON WORKING DRAWINGS AND QUANTITIES OF PROPOSED BUILDINGS ALONG LINES SHOWN IN PAGES 49 TO 57 OF DESIGN DEVELOPMENT REPORT OF JULY 1973 BUT INCLUDING PHYSICAL AND PRICE ESCALATION CONTINGENCIES WITH INDICATION OF HOW CONTINGENCIES ARE CALCULATED BETA BREAKDOWN OF CONSTRUCTION COST PER UNIT AREA OF EACH BUILDING TYPE GAMMA TOTAL ESTIMATED FURNITURE AND EQUIPMENT COSTS INCLUDING CONTINGENCIES DELTA LATEST ESTIMATE OF PROFESSIONAL FEES FOR ARCHITECTURAL AND RELATED ENGINEERING AND SUPERVISION WORK ZETA SCHEDULE OF ESTIMATED YEARLY DISBURSEMENTS BASED ON CONSTRUCTION AND PROCUREMENT PROGRAM STOP WE SUGGEST CONSULTANTS BE REQUESTED TO CALCULATE CONTINGENCIES SEPARATELY FOR LOCAL AND FOREIGN COSTS. REGARDS.

GRAVES  
INTBRABAD

NOT TO BE TRANSMITTED

CLEARANCES AND COPY DISTRIBUTION

Mr. Kraska

COMMUNICATIONS SECTION

MAR 8 10 38 PM 1974

Harold N. Graves, Jr.

Agriculture & Rural Development

SIGNATURE OF INDIVIDUAL AUTHORIZED TO DISPATCH

Graves:qpm

ORIGINAL (file copy)

IMPORTANT: See Secretary's Guide for preparing form

For Use By Communications Section

Checked for Dispatch



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

File ICRISAT

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

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

March 6, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

I wish to thank you very much for your letter of February 28 written from Tokyo. Your figure of 18 1/4 million for our capital requirements is not far from our own. However, I believe that we would be inclined to include in this 18 1/4 million the amounts which have already been spent or committed in 1972 and 1973, which would bring down the requirements for the 1974-77 period to that extent. When we get our tenders in around May 1 we should be able to estimate this somewhat more closely, however. The very substantial instability in prices on so many items at the present time makes it very difficult to make these estimates with any great precision.

While I understand your real concern over the prospects for raising the necessary funds for the entire program envisaged, I do hope that we will not have to curtail the plans very much. I shall anticipate hearing from you soon after you get back to Washington as to the current thinking and presumably the schedule for a meeting for further review of ICRISAT's capital plan.

I certainly appreciate your work in contacts with the Asian Development Bank and the Japanese Government. I note your suggestion that we follow up on these contacts, and I have written to Fred Bentley to begin developing plans hopefully for both of us to visit there either preceding or just after our Trustees meeting at the end of May. I hope we will be able to work this out but will await further advice from Fred Bentley.

We enjoyed very much yours and Mr. Lewis's visit with us. We certainly appreciate all you are doing in our behalf.

With warmest regards, I am,

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

RWC:jg

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

ICRISAT

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

Phones : 75091, 75258  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

March 6, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

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We enjoyed very much yours and Mr. Lewis's visit with us. We certainly appreciate all you are doing in our behalf.

With warmest regards, I am,

1974 MAR 13 09:10:16

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

RECEIVED

RWC:jg



*G3a*

**OUTGOING WIRE**

TO: MELVILLE  
MINISTRANT  
LONDON

DATE: MARCH 6, 1974

CLASS OF  
SERVICE: TELEX

*IT*

COUNTRY: ENGLAND

TEXT:  
Cable No.:

IN ORDER TO CONSIDER PROBLEMS ARISING FROM CONSIDERABLY ELEVATED COST  
ESTIMATES FOR [ICRISAT] CONSTRUCTION WE ARE ASKING DONORS TO MEET IN  
WASHINGTON ON APRIL 4 AND IF NECESSARY APRIL 5. HOPE YOU CAN CONFIRM YOU  
WILL BE REPRESENTED. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

For Use By Communications Section

Checked for Dispatch: *[Signature]*

*COMMUNICATIONS  
MAR 8 11 20 AM '74*

230

INTERNATIONAL FINANCE CORPORATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

Form No. 22 (8-57)

OUTGOING WIRE

DATE: MARCH 6, 1974

TO: MELVILLE  
MINISTRANT  
LONDON

CLASS OF SERVICE: TELETYPE

COUNTRY: ENGLAND

TEXT: Cable No.

IN ORDER TO CONSIDER PROBLEMS ARISING FROM CONSIDERABLY ELEVATED COST ESTIMATES FOR ICRIST CONSTRUCTION WE ARE ASKING DOMORS TO MEET IN WASHINGTON ON APRIL 4 AND IF NECESSARY APRIL 5. HOPE YOU CAN CONFIRM YOU WILL BE REPRESENTED. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

CLEARANCES AND COPY DISTRIBUTION

COMMUNICATIONS  
MAR 6 11 19 AM 1974

NAME: Harold N. Graves, Jr.

DEPT: Agriculture & Rural Development

SIGNATURE: [Signature]

REFERENCE: Graves: qgm

ORIGINAL (File Copy)

IMPORTANT - See Secretariat Guide for preparing form

For use by Communications Section

Checked for Dispatch

[Signature]



93a

**OUTGOING WIRE**

TO: NORAD  
X 16548  
OSLO

DATE: MARCH 6, 1974

CLASS OF  
SERVICE: TELEX

*WUM*

COUNTRY: NORWAY

TEXT:  
Cable No.:

WORLD BANK ARCHITECT HAS VISITED ICRISAT AND DISCUSSED PLANS WITH ICRISAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF ICRISAT CAPITAL PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS RATHER THAN SIXTEEN POINT FOUR MILLION WHICH WAS FIGURE MOST RECENTLY PROPOSED TO DONORS BY ICRISAT. IT APPEARS HIGHLY DESIRABLE THAT DONORS SHOULD DISCUSS NEW SITUATION AND WE CONVENING MEETING IN WASHINGTON APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. WOULD BE HAPPY IF NORAD COULD BE REPRESENTED.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.  
DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves :apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Kastoft

For Use By Communications Section

Checked for Dispatch: *SC*

230

INTERNATIONAL FINANCE CORPORATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Form No. 27  
INTERNATIONAL DEVELOPMENT ASSOCIATION

OUTGOING WIRE

MARCH 6, 1974

DATE

NORAD  
X 16548  
OSLO

TO:

CLASS OF

TELEX

SERVICE

NORWAY

COUNTRY:

TEXT:

Cable No.:

WORLD BANK ARCHITECT HAS VISITED ICRISAT AND DISCUSSED PLANS WITH ICRISAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF ICRISAT CAPITAL PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS RATHER THAN SIXTEEN POINT FOUR MILLION WHICH WAS FIGURE MOST RECENTLY PROPOSED TO DONORS BY ICRISAT. IT APPEARS HIGHLY DESIRABLE THAT DONORS SHOULD DISCUSS NEW SITUATION AND WE CONVENING MEETING IN WASHINGTON APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. WOULD BE HAPPY IF NORAD COULD BE REPRESENTED.

GRAVES

NOT TO BE TRANSMITTED

CLEARANCES AND COPY DISTRIBUTION

cc: Mr. Kasloff

For Use By Communications Section

Checked for Dispatch 26

AUTHORIZED BY:

NAME

DEPT.

SIGNATURE

REFERENCE

Harold N. Graves, Jr.  
Agriculture and Rural Development  
COMMUNICATIONS  
MAR 16 11 16 PM 1974

Graves: gpm

ORIGINAL (File Copy)

(IMPORTANT: See Secretariat Guide for preparing form)



93a

**OUTGOING WIRE**

TO: TREITZ  
BMZ  
BONN

DATE: MARCH 6, 1974

CLASS OF  
SERVICE: TELEX 8869452

COUNTRY: GERMANY

*Wm*

TEXT:  
Cable No.: WORLD BANK ARCHITECT HAS VISITED [ICRISAT] AND DISCUSSED PLANS WITH ICRISAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF ICRISAT CAPITAL PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS RATHER THAN SIXTEEN POINT FOUR MILLION WHICH WAS FIGURE DISCUSSED BY ICRISAT DONORS IN MEETING LAST OCTOBER. IT APPEARS HIGHLY DESIRABLE THAT DONORS SHOULD DISCUSS NEW SITUATION AND WE PROPOSING MEETING IN WASHINGTON APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. HOPE YOU WILL CONFIRM THAT ~~YOUR~~ <sup>YOUR MINISTRY</sup> ~~GERMANY~~ WILL BE REPRESENTED. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.  
DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Claus Knetschke

For Use By Communications Section

Checked for Dispatch: *SC*

COMMUNICATIONS SECTION  
MAR 11 1974  
DISPATCHED

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: TRILIT  
DMZ  
HONN

DATE: MARCH 8, 1974  
CLASS OF SERVICE: TELEX 8889452

COUNTRY: GERMANY

TEXT: Cable No.

WORLD BANK ARCHITECT HAS VISITED ICRISAT AND DISCUSSED PLANS WITH ICRISAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF ICRISAT CAPITAL PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS RATHER THAN SIXTEEN POINT FOUR MILLION WHICH WAS FIGURE DISCUSSED BY ICRISAT DONORS IN MEETING LAST OCTOBER. IT APPEARS HIGHLY DESIRABLE THAT DONORS SHOULD DISCUSS NEW SITUATION AND WE PROPOSING MEETING IN WASHINGTON APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. HOPE YOU WILL CONFER THAT ~~YOUR MINISTRY~~ <sup>YOUR MINISTRY</sup> WILL BE REPRESENTED. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME: Harold N. Graves, Jr.

DEPT: Agriculture and Rural Development

cc: Mr. Claus Kretschke

COMMUNICATIONS  
MAR 9 11 09 PM 1974

SIGNATURE: *[Signature]*  
SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

REFERENCE:

HGraves: agm

DISPATCHED

ORIGINAL (File Copy)

Checked for Dispatch

*[Handwritten mark]*

(IMPORTANT: See Secretary's Guide for proper form)

*[Handwritten mark]*



93a

**OUTGOING WIRE**

TO: SIDA  
STOCKHOLM

DATE: MARCH 6, 1974

CLASS OF  
SERVICE: TELEX 10630 *uu*

COUNTRY: SWEDEN

TEXT:  
Cable No.: WORLD BANK ARCHITECT HAS VISITED ICRISAT AND DISCUSSED PLANS WITH ICRISAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF ICRISAT CAPITAL PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS RATHER THAN SIXTEEN POINT FOUR MILLION WHICH WAS FIGURE DISCUSSED BY ICRISAT DONORS IN MEETING LAST OCTOBER. IT APPEARS HIGHLY DESIRABLE THAT DONORS SHOULD DISCUSS NEW SITUATION AND WE PROPOSING MEETING IN WASHINGTON APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. HOPE SIDA WILL CONFIRM THAT IT WILL BE REPRESENTED.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Kastoft

For Use By Communications Section

Checked for Dispatch: *JK*

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: SIDA  
STOCKHOLM

DATE: MARCH 6, 1974

CLASS OF SERVICE: TRILIX 10630

COUNTRY: SWEDEN

TEXT: Cable No.

WORLD BANK ARCHITECT HAS VISITED IGRIAT AND DISCUSSED PLANS WITH  
 IGRIAT MANAGEMENT AND ARCHITECTS. HE BELIEVES WHEN PROPER ALLOWANCE IS  
 MADE FOR CONTINGENCIES INCLUDING INFLATION THAT COSTS OF IGRIAT CAPITAL  
 PLAN BETWEEN NOW AND 1977 MUST BE ESTIMATED OVER TWENTY MILLION DOLLARS  
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 DONORS SHOULD DISCUSS NEW SITUATION AND WE PROPOSING MEETING IN WASHINGTON  
 APRIL FOUR WITH POSSIBLE CONTINUATION TO APRIL FIVE. HOPE SIDA WILL  
 CONFIRM THAT IT WILL BE REPRESENTED.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT

Agriculture & Rural Development

SIGNATURE

*Harold N. Graves, Jr.*

REFERENCE

HGraves:qpm

ORIGINAL (File Copy)

COMMUNICATION  
MAR 6 11 12 PM '74

DISPATCHED

For Use By Communications Section

*RC*

Checked for Dispatch

IMPORTANT: See instructions for preparing form



93a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: MARCH 6, 1974

CLASS OF  
SERVICE: FULL RATE

RCA

COUNTRY: INDIA

TEXT:  
Cable No.:

WE ARRANGING ICRISAT SUBCOMMITTEE MEETING IN WASHINGTON FOR APRIL FOUR WITH RUNOVER TO APRIL FIVE IF NECESSARY. HOPE THIS DATE FEASIBLE FOR YOU AND SHORTLY WILL BEGIN COMMUNICATING SUGGESTIONS ABOUT PRESENTATION WE BELIEVE MIGHT BE HELPFUL FOR YOU TO MAKE. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.  
DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves :apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

For Use By Communications Section

*[Handwritten signature]*

Checked for Dispatch: \_\_\_\_\_

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: CUMINGS  
ORISAT  
SECUNDERABAD

DATE: MARCH 6, 1974

CLASS OF SERVICE: FULL RATE

COUNTRY: INDIA

TEXT  
Cable No.

WE ARRANGING ORISAT SUBCOMMITTEE MEETING IN WASHINGTON FOR APRIL FOUR  
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MIGHT BE HELPFUL FOR YOU TO MAKE. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

CLEARANCE AND DEPT DISTRIBUTION

SECTION  
COMMUNICATIONS

Harold N. Graves, Jr.  
Agriculture & Rural Development

SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

DISPATCHED

Graves: apr

ORIGINAL (File Copy)

IMPORTANT: See Secretary's Guide for printing form

For Use by Communications Section

Checked for Department



*G.3a*

MAR 6 5 1974

ZCZC 248423 RC002 PDJ0458 RML7284 KNY239 EDS617/5

URWI HL INEX 047

SECUNDERABAD 47 5 1100

Distribution: Mrs. Hughes  
Mr. Gulhati

MARCH 5, 1974

LT

INTBAFRAD

WASHINGTONDC(USA)

ATTN HELEN HUGHES DR RALPH CUMMINGS DIRECTOR INTERNATIONAL  
CROPS RESEARCH INSTITUTE FOR THE SEMI ARID TROPICS HYDERABAD  
WILL PARTICIPATE FERTILIZER CONFERENCE MAY 23 24 AND 25 BARRING  
UNFORESEEN DEVELOPMENTS STOP PLEASE FORWARD DETAILS HIS ADDRESS  
IS 1-11-256 BEGUMPET HYDERABAD 500016 INDIA

WIESBLAT [CRISAT] SECUNDERABAD

COL LT WASHINGTONDC(USA) 23 24 25 1-11-256 500016

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

BHC  
HS  
CJ

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

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

February 28, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

With reference to my letter of January 31 giving a calendar of events for the year 1974, I would like to inform you of the change in the dates for the proposed workshop on Farming Systems Research at ICRISAT. We now propose this meeting to be held during November 18 to 21, 1974. In checking the calendar of events furnished by you, we note this in no way conflicts with any other meetings referred to therein. We trust you will find the above dates satisfactory.

With best wishes, I am,

Sincerely yours

*Ralph W. Cummings*

Ralph W. Cummings  
Director

VB:jg

1017003-2 1073:10

RECEIVED



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

CITY OFFICE :  
1-11-286, Begumpet,  
Hyderabad-200016, A. P., India

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

February 28, 1974

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Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

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With best wishes, I am,

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

1974 MAR -8 PM 12:40

RECEIVED

VB: jg



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

ICRISAT

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

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

February 27, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Agril. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

I am enclosing our revision of the draft memorandum we prepared hastily before your departure on February 16. Please let me know what we need to do further.

I shall anticipate hearing from you soon as to whether you plan to schedule a meeting of the ICRISAT sub-committee to review our capital plan and if so, where and when. We can adjust our schedules, etc. to meet the convenience of the members of the sub-committee.

It was a pleasure to have you visit with us.

Very truly yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

Encl:

1011010-3 0011:23

RWC:jg

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FOR THE SEMI-ARID TROPICS  
(ICRISAT)



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*Ralph W. Cummings*  
Ralph W. Cummings  
Director

COMMUNICATIONS  
Encl: 1  
1974WRB-7 0411:57

RWC:tg RECEIVED

✓ G3e  
Mid. East  
Institute

✓ cc: G3a

Mr. Warren C. Baum, Vice President, CPS

February 22, 1974 FI

Bruce M. Cheek, AGPCG

CGIAR -- Some Matters Outstanding

1. Middle East Institute. As indicated in my memo of January 12 to Mr. Graves, TAC is still defining the scope and content of a Middle East Institute. It has, however, taken the position that a major center is needed and that it will formulate a proposal before International Centers Week. Presumably, this will mean further work by the Hopper Subcommittee of TAC. Hopper wants to talk to you about the tactics of establishing a Middle East Institute and is expecting to be in touch with you by 'phone on your return from Rome. One of the matters at issue is the role of the Arabs with respect to funding of such a center and to participation in the CG as member(s) and as contributors of finance on a broader basis. On this, you will no doubt be in touch with Mr. Benjenk in his new capacity; he has already raised the Middle East Institute question with the Arab Fund and reports that it may be in a position to consider the question by mid-year.

2. ICRISAT. Harold Graves has proposed by cable from Delhi a donor meeting between March 20 and April 15. In view of the CIMMYT program and of Holy Week, perhaps the latter part of the week beginning April 1 would be best for a one-two day meeting.

3. TAC. On the next occasion of reviewing CG matters, and prior to Darnell representing the Bank at the Bellagio VI where he will see Sir John Crawford, we should look into some TAC business such as (up to five) changes in its membership to be made before December, 1974 and the effectiveness with which TAC handles the items on its agenda in its semi-annual session.

cc: Mr. Yudelman  
Mr. Graves

BMC:mcj



# ICRISAT

## Inter-Office Memorandum

TO : Mr. Harold Graves  
FROM : Ralph W. Cummings, Director  
SUBJECT: Mr. Thint's Report Concerning the Capital Development Program for ICRISAT dated 31st January, 1974.

DATE : February 16, 1974

COPY TO:

I have reviewed this report and have the following comments by paragraphs:

3. & 4. It was a design development report which was submitted in July 1973. The schematic designs were prepared somewhat earlier. Based on the approval of the design development reports, the architects have been proceeding with the planning and indicate to us now the following schedule:

	<u>Institutional Buildings</u>	<u>Staff Housing</u>
Completion of working drawings and tender documents and submission of these to bidding contractors	March 15, 1974	May 31, 1974
Receipt of tenders	May 1, 1974	June 30, 1974
Completion of review and recommendations by architects	May 21, 1974	July 15, 1974
Review by ICRISAT Board, Hyderabad	May 31 to June 1, 1974	
Consideration by Executive Committee of the Governing Board, Washington		July 27, 1974
Award of Contracts if bids accepted	Early June	Early August

Tenders submitted by potential contractors will be valid for acceptance by the owner for a period not to exceed 60 days beyond final date of tender.

5. We have reviewed with the architects the basis for bidding and are in full agreement to change the type of contract to an item rate rather than a lump sum basis. Under current circumstances, we see no valid alternative to this change.

6. The budget figure for construction stipulated in the architects contract was approximately U.S. \$7.4 million, although they themselves estimated at that time that the cost would be somewhat larger for the program, specifying at that time the estimated cost of about U.S. \$8.7 million, assuming an exchange rate of Rs.7.3 = U.S. \$1.00. The Board felt that we should hold the specifications and costs to a modest level, and authorized signing the contract at the U.S. \$7.4 million figure or the accepted tendered amount. In July 1973 the architects estimated the cost of construction of project items 'B' and 'C' of our Capital Budget at U.S. \$10 1/2 million for minimum specifications, and U.S. \$11.5 with adequate specifications excluding physical and price contingencies and architect and consultant fees. The Board in its review suggested certain changes, particularly toward a more modest scale for staff housing, and a few other economies. The economies suggested by the Board and given in instructions to the architects, would have been sufficient to offset the difference in the estimated U.S. \$10 1/2 and U.S. \$11 1/2 million, so that if one were to accept the architect's figures, the U.S. \$10 1/2 million would be more nearly the appropriate base. This was calculated on the assumption of an exchange rate of Rs.7.3 = U.S. \$1.00. The present exchange rates as of February 15, 1974 are approximately Rs.8.25 = U.S. \$1.00 but are not remaining constant. In recent discussions with the architects, they indicate that inflation since July 1973 might result in an increase of approximately 25% in building costs. If one adds this to the U.S. \$10.5 million figure and makes the adjustment to an exchange rate of Rs.8.25 = U.S. \$1.00, the converted estimate would be U.S. \$11.6 million dollars. There may be some further advance as a result of continuing inflation, although indications are that the rate of increase may have slowed down to some extent.

We have already stockpiled a considerable portion of the reinforcing steel which has been obtained from government quotas at controlled rates, and are making arrangements for cement on a comparable basis. With these advance actions, and our change to an item rate basis of contracting, we hope to reduce the speculative component for the bidding to some degree. We believe that the 25% estimate by the architects may be a generous one.

7. The prequalifications of contractors and nominated sub-contractors is in process. There are now about 25 Indian contractors and 13 sub-contractors who have responded to the advertisement, and the prequalification exercise is already underway.

The monsoon will present no serious deterrent to the contractor in beginning his work and should not be a factor in determining the date of awards of contracts.

8. The division suggested between institutional buildings and staff housing is not correct. We note that Mr. Thint has included the dormitories and flatlets for scholars and trainees, the guest house, recreational centre, and the dining centre with staff housing. We consider this an integral part of the institutional portion, and would be included in Phase I. The Director's residence, international staff housing, essential support



staff housing and other support staff quarters, are the only parts we would include in staff housing. The scale of the staff housing has been reduced and made somewhat more modest following a discussion with the Trustees in August 1973. This changes the proportions very materially, and a revised table is attached. (See Appendices I & II).

9. In addition to the items listed by Mr. Thint for Phase I, the dining centre and guest house should also be included in Phase I. (See Appendix I).
10. We are presenting a revised complete table (see Appendix III) of our estimated costs for the capital budget projections which includes the years 1972 and 1973. We believe this is a more nearly realistic projection. Items B and C are the only ones which would go out for construction contract. Items E and F, namely, consultants fees and landscaping and contingencies would be applicable to portions of B and C. The items of site development listed under 'A' would be handled directly by the ICIRSAT staff. Equipment (Item D) is being selected and purchased on an international basis.

ICRSAT's Governing Board did not accept the architects estimated cost figures of U.S. \$10 1/2 and 11 1/2 million respectively in the July Design Development Report, nor did they accept the estimated unit cost. They did approve generally the architects specifications and drawings with reference to most of the institutional buildings but asked for a substantial modification with considerable economy both of scale and cost of staff housing and on a few minor items such as the gate house, etc. These are now incorporated into the revised plans. The Board felt at that time that the capital budget estimate in total should be increased by U.S. \$3 million from U.S. \$13.4 to 16.4 million. This escalation is incorporated in the accompanying table. (Appendix III).

With the advance action and planning already undertaken by the Institute, we believe that Mr. Thint's allowance for contingencies is somewhat higher than necessary.

11. The core budget figures have not made allowance for inflation in costs. Since the Institute is building up its program, we had anticipated that we would absorb these costs during the period up to 1977 by some adjustments in the scope of the program. However, if one were to allow a cumulative annual inflation of 7%, the core budget figures for the latter three years would be:

1975	U.S. \$ 3.85 million
1976	4.6 "
1977	5.1 "

12. - - -

13. We still believe that it would be wise for us to divide the contract into two parts, namely, Phase I (institutional buildings) and Phase II (housing), with the two month gap in the beginning time, if this is feasible. As indicated above, however, Phase II is substantially smaller than might have been suggested in Mr. Thint's report.

14. We are in full agreement, and are making arrangements for an item rate type of contract rather than the lump sum. We are arranging for obtaining quotations and purchase of a number of building materials and equipment items on an international basis. It may be difficult, however, for us to fully accept or implement full international competitive bidding. I believe, however, that our procedure will accomplish the same end.
15. This has already been covered above.
16. We have already made such adjustments as we think feasible looking toward some economies in the building project. We do wish to have a quality standard that will result in economical maintenance, and it would be difficult to modify the project in any significant way further.
17. - - -
18. We would have no serious difficulty in setting up a separate capital account. Since many of the donors do not specify and allow considerable flexibility as to whether their contributions go toward capital or operating budgets, we may wish to defer the transfer of a portion of the funds, which will eventually go toward capital, from our general accounts to the capital account. We would, however, expect to keep separate books of account for the capital expenditures and the operational budget, respectively.
19. We hope very much that the line of credit decided upon by IDA may be sufficient to permit us to proceed expeditiously with the award of contracts and development of approval of the project within a minimum feasible time.

  
RALPH W. CUMMINGS

Encls:

RWC:jg



February 16, 1974

ICRISAT BUILDING PROGRAM

APPENDIX - I

(EXTRACTED FROM ARCHITECT'S DESIGN DEVELOPMENT REPORT - JULY 1973)

No.	Type of Facility	Gross Area of Construc- -tion (sq. ft.)	Revised Gross Area (sq.ft.)	Architect's	Owner's	Remarks
				Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Revisions Subsequent to Aug.1973 (Rupees)	
<u>A. INSTITUTIONAL BUILDINGS:</u>						
200	Administration	24,570		2,150,000		
203	Library	13,850		1,060,000		Includes 1560 sq.ft. future stack area & 5840 sq.ft. stilt area
202	Auditorium	6,410		580,000		
307	Training Office	2,700		230,000		
300	Laboratory I	22,260		2,850,000		
301	Laboratory II	22,260		2,850,000		
302	Laboratory III	22,260		2,315,000		
312	Plant Quarantine			(500,000) Deleted		Omitted from Phases (I&II) Can be accommodated in buildings constructed for temporary operational head- -quarters with limited modifications

No.	Type of Facility	Gross Area of Construction (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug. 1973 (Rupees)	Remarks
A. Institutional Buildings (Cont'd)						
308	Crop Work Area	29,860	31,583	1,430,000	1,513,000	Covered work area increased in size.
401	Farm Machinery, Maintenance & Stores	48,640	52,640	2,540,000	2,749,000	Shop increased in size.
400	Mechanical, Electrical Services	9,470		610,000		
309	Radio Isotope Lab, Plant propagation, Soil Storage	21,150		1,540,000		
206- 207- 208	Chemical Store & Warehouse	10,570		470,000		
205	Canteen	9,620		740,000		
209	Laundry	2,080		130,000		
310- 311	Greenhouses	24,000		1,314,000		
500- 501	Dormitories	63,000		5,630,000		Includes 12,900 sq.ft. of stilt area.
502	Flatlets	14,780		1,430,000		Includes 3,700 sq.ft. of stilt area
700	Guest House/Recreation Centre	17,500	15,500	1,500,000	1,329,000	Includes 12 guest rooms 2 suits - reduced in size.
204	Dining Centre	18,580		1,375,000		
	Sub-Total:			30,964,000	31,085,000	



No.	Type of Facility	Gross Area of Construc- -tion (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug.1973 (Rupees)	Remarks
<u>B. HOUSING:</u>						
600	Director's Residence	5,950	4,500	560,000	400,000	Being reduced in size.
601-	International staff housing					
602-	20 units	59,620	45,000	6,240,000	4,710,000	Reduced in size
603	(4, 3 & 2 bedrooms)					
610-	Essential Support staff					Specs. (and unit costs)
611-	housing - 36 units	56,100		5,950,000	3,366,000	reduced.
612	(3 and 2 bedrooms)					
620/	Other support staff	17,600		<u>1,200,000</u>	<u>704,000</u>	Specs. (and unit costs)
621	housing - 32 units			<u>13,950,000</u>	<u>9,180,000</u>	reduced.
	Sub-Total:					
<u>C. AIR-CONDITIONING INSTALLATION:</u>						
	Air-Conditioned Space	225,000 )				
	Evaporative cooling space	175,000 )	118,000	<u>10,200,000</u>	<u>10,000,000</u>	Evaporative cooling elimi- nated from essential support staff housing.
	Sub-Total:			<u>10,200,000</u>	<u>10,000,000</u>	
<u>D. RECREATIONAL FACILITIES:</u>						
	Swimming Pool & Wading Pool			680,000		
	Tennis & Squash Courts			<u>680,000</u>		
	Sub-Total:			<u>1,360,000</u>	<u>1,360,000</u>	

No.	Type of Facility	Gross Area of Construction (sq.ft.)	Revised Gross Area (sq.ft.)	Architect's Estimated cost July 1973 (from Design Dev. Report) (Rupees)	Owner's Revisions Subsequent to Aug. 1973 (Rupees)	Remarks
<u>E. CAMPUS SITE DEVELOPMENT &amp; EXTERNAL WORKS:</u>						
	Campus Site Development			18,130,000	18,000,000	Gate house, Sewage treatment plant, fire hydrants, & external lighting decreased in scope and size.
	Generators (including Elec./ Civil work)			<u>1,870,000</u>	<u>1,870,000</u>	
			Sub-Total:	<u>20,000,000</u>	<u>19,870,000</u>	
	TOTAL (A+B+C+D+E):		Rs.	<u>76,474,000</u>	<u>71,495,000</u>	
	TOTAL ( " ):		US \$	10,475,890	9,793,836	(@Rs.7.30 per US \$ 1.00)
	Additional for Adequate Specification		Rs.	6,700,000	5,100,000	
			US \$	<u>447,308</u>	<u>698,630</u>	(@Rs.7.30 per US \$ 1.00)
	TOTAL:		US \$	11,393,698	10,492,466	(@Rs.7.30 per US \$ 1.00)
			US \$	<u>10,081,697</u>	<u>9,284,242</u>	(@Rs. 8.25 per US \$ 1.00)
(Plant quarantine deleted)						



February 16, 1974

APPENDIX - II

PERCENTAGE OF TOTAL CONSTRUCTION COST BY  
MAJOR CATEGORIES

Category of Work	% of Total Construction Cost	
	July 1973	Feb. 1974
Institutional Buildings ...	41	43
Staff Housing ...	18	13
Air-Conditioning/Mechanical ...	13	14
Recreational Facilities ...	2	2
Campus Site Development and External Works ...	26	28
	<u>100</u>	<u>100</u>

February 16, 1974

ICRISAT CAPITAL BUDGET PROJECTIONS, JANUARY 1974<sup>1/</sup>

APPENDIX - III

Category of Work	U.S. Dollars in thousands <sup>2/</sup>						Total Estimated Cost
	Actuals		Estimates				
	1972	1973	1974	1975	1976	1977	
A. Site Development (by ICRISAT)	105	223	82	34	15	12	471
B. Campus External Work (Contract)	-	-	446	779	365	486	2,076
C. Building Construction (Contract)	-	427	1,346	3,246	1,856	1,197	8,090
D. Equipment	53	874	740	1,386	552	138	3,743
E. Consultant's Fees and Landscaping	-	242	184	185	412	42	1,065
F. Contingencies	-	-	202	352	300	125	979
TOTAL:	158	1,766	3,000	6,000	3,500	2,000	16,424

<sup>1/</sup> Prior to Mr. K. Thint's visit, Hyderabad.

<sup>2/</sup> Based on Rs. 7.30 per U.S. \$ 1.00.



## OFFICE MEMORANDUM

TO: Mr. George F. Darnell

DATE: February 14, 1974

FROM: R. Picciotto

SUBJECT: ICRISAT

As I told you on the phone, Mr. Weiner has inquired why Mr. Cargill--and no Regional Projects staff--had been listed in the distribution of Mr. Thint's January 31 memo on the above subject. This is to confirm that we would appreciate having the following names included on the circulation list of ICRISAT related memoranda: Picciotto, Parsons, Burt. Thank you.

RPicciotto/cta

cc: Messrs. Weiner, Yudelman, Graves, Thint.

Mr. Check

93a

**OUTGOING WIRE**

TO: **A. R. MELVILLE**  
**MINISTRANT**  
**LONDON**

DATE: **FEBRUARY 8, 1974**

CLASS OF  
SERVICE: **TELEX OR IT**

COUNTRY: **ENGLAND**

IT

TEXT:  
Cable No.: **PASSING THROUGH LONDON MORNING FEBRUARY THIRTEEN ON MY WAY TO ICRISAT.**

**WOULD APPRECIATE OPPORTUNITY TO TALK WITH YOU BETWEEN TEN AND ELEVEN O'CLOCK  
THAT MORNING ABOUT ICRISAT. CAPITAL ESTIMATES NOW SEEM TO SECRETARIAT TO BE  
RISING PAST \$20 MILLION AND TO REQUIRE RE-ASSESSMENT. REGARDS.**

**GRAVES**

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME **Harold N. Graves, Jr.**

DEPT. **Agriculture and Rural Development**

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: **HGraves : apm**

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

COMMUNICATIONS SECTION  
FEB 13 1974

For Use By Communications Section

Checked for Dispatch: *by*



INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: A. R. MELVILLE  
MINISTRENT  
LONDON

DATE: FEBRUARY 8, 1974

CLASS OF SERVICE: TELETYPE OR TELETYPE

COUNTRY: ENGLAND

TEXT: Cable No.

PASSING THROUGH LONDON MORNING FEBRUARY THIRTEEN ON MY WAY TO ICRISAT.  
WOULD APPRECIATE OPPORTUNITY TO TALK WITH YOU BETWEEN TEN AND ELEVEN O'CLOCK  
THAT MORNING ABOUT ICRISAT. CAPITAL ESTIMATES NOW SEEM TO SECRETARIAT TO BE  
RISING PAST \$20 MILLION AND TO REQUIRE RE-ASSESSMENT. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME:

Harold N. Graves, Jr.

DEPT:

Agriculture and Rural Development

SIGNATURE:

*Harold N. Graves, Jr.*

REFERENCE:

HGraves:apm

ORIGINAL (File Copy)

(IMPORTANT: See Secretary's Guide for preparing form)

Checked for Dispatch:

*[Handwritten signature]*

COMMUNICATIONS  
FEB 8 2 32 PM 1974  
*[Handwritten signature]*

For Use by Communications Section

63a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: FEBRUARY 8, 1974

CLASS OF  
SERVICE: ~~TELETYPE~~

*Lt/RCA*

COUNTRY: INDIA

TEXT:  
Cable No.:

KIN MAUNG THINT VERY MUCH APPRECIATED YOUR HELPFULNESS DURING HIS VISIT TO ICRISAT AND REGRETTED HE COULD NOT COMPLETE HIS REPORT IN TIME FOR DISCUSSION WITH YOU. HOWEVER HE HAS NOW COMPLETED HIS REPORT AND WHILE HIS FIGURES ARE STILL SUBJECT TO CHECK AND FURTHER DISCUSSION HIS CALCULATIONS SUGGEST A FURTHER SUBSTANTIAL RISE IN THE CAPITAL COSTS OF ICRISAT. HE CALCULATES THAT WHEN ALLOWANCE IS MADE ACCORDING TO USAID AND WORLD BANK STANDARD PRACTICE FOR PHYSICAL AND PRICE CONTINGENCIES A REALISTIC ESTIMATE OF COST OF ICRISAT CAPITAL PLAN APPROACHES TWENTY ONE MILLION DOLLARS. THIS FIGURE PROBABLY IS SOMEWHAT HIGH CONSIDERING THAT YOUR ARCHITECTS ARE SCALING DOWN PROPOSED HOUSING. NEVERTHELESS YOU CAN APPRECIATE THAT CAPITAL ESTIMATE OF THIS ORDER OF MAGNITUDE WOULD PRESENT CONSULTATIVE GROUP WITH A PROBLEM WHICH COULD NOT BE MANAGED WITHIN THE TIME SPAN NOW ENVISAGED. THERE WOULD IN ANY CASE BE CONSIDERABLE RELUCTANCE ON THE PART OF MAJOR DONORS TO FINANCE HOUSING IN THE NUMBER OF UNITS SUGGESTED. EYE NOTICE ALSO THAT YOUR PLANNED LABORATORY SPACE IS CONSIDERABLY MORE THAN CIAT OR IITA HAVE. (CONT....)

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

For Use By Communications Section

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(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: \_\_\_\_\_



**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: FEBRUARY 8, 1974

CLASS OF  
SERVICE:

COUNTRY: INDIA

TEXT:  
Cable No.:

- PAGE TWO -

BE  
SO THAT WE CAN DISCUSS THE MATTER IN HYDERABAD I WOULD/VERY GRATEFUL  
IF YOU COULD GIVE THOUGHT TO OPPORTUNITIES FOR REDUCING ANNUAL FUNDING  
REQUIREMENTS BOTH BY ABSOLUTE REDUCTIONS AND BY STRETCHING OUT CAPITAL  
PLAN TO LONGER TIME SPAN.

REGARDS

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

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(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *MS*

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

CUMINGS  
CRISAI  
SECUNDERABAD

DATE: FEBRUARY 8, 1974

CLASS OF SERVICE:

COUNTRY: INDIA

TEXT: Cable No.

- PAGE TWO -

BE  
30 THAT WE CAN DISCUSS THE MATTER IN HYDRABAD EYE WOULD VERY GRATEFUL  
IF YOU COULD GIVE THOUGHT TO OPPORTUNITIES FOR REDUCING ANNUAL FUNDING  
REQUIREMENTS BOTH BY ABSOLUTE REDUCTIONS AND BY STRETCHING OUT CAPITAL  
PLAN TO LONGER TIME SPAN.

REGARDS

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT.

Agriculture & Rural Development

SIGNATURE

[Signature]

REFERENCE

COMMUNICATIONS SECTION

FEB 11 5 44 PM 1974

DISPATCHED

ORIGINAL (File Copy)

[Handwritten initials]



G3a

**OUTGOING WIRE**

TO: LOWELL HARDIN  
NORMAN COLLINS  
FORD FOUNDATION  
NEW YORK CITY  
COUNTRY: USA

DATE: FEBRUARY 7, 1974  
CLASS OF SERVICE: TELEX

WU

TEXT:  
Cable No.:

THREE WEEKS AGO WORLD BANK SENT ONE OF ITS ARCHITECTS KIN MAUNG THINT TO LOOK AT CONSTRUCTION PLANS OF ICRISAT IN COURSE OF PREPARING PROPOSAL TO BANK MANAGEMENT ON STANDBY FOR ICRISAT CAPITAL FINANCING. AS PLANNED SOME TIME AGO EYE WILL BE AT ICRISAT NEXT FEBRUARY 14 THROUGH 16. HAVE DRAFTED FOLLOWING CABLE TO CUMMINGS AND WOULD APPRECIATE YOUR REACTION AND COMMENTS BEFORE SENDING IT --

THINT HAS GIVEN US A REPORT SAYING THAT WHEN ALLOWANCE IS MADE ACCORDING TO USAID AND WORLD BANK STANDARD PRACTICE FOR PHYSICAL AND PRICE CONTINGENCIES A REALISTIC ESTIMATE OF COST OF ICRISAT CAPITAL PLAN APPROACHES TWENTY ONE MILLION DOLLARS. THIS FIGURE PROBABLY IS SOMEWHAT HIGH SINCE YOUR BUDGET ALREADY CONTAINS SOME ALLOWANCE FOR CONTINGENCIES AND CONSIDERING THAT YOUR ARCHITECTS ARE SCALING DOWN PROPOSED HOUSING. NEVERTHELESS YOU CAN APPRECIATE THAT CAPITAL ESTIMATE EVEN OF NINETEEN MILLION DOLLARS WOULD PRESENT CONSULTATIVE GROUP WITH A PROBLEM WHICH

CONT....

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.  
DEPT. Agriculture & Rural Development

SIGNATURE \_\_\_\_\_  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

For Use By Communications Section

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: \_\_\_\_\_

**OUTGOING WIRE**

TO: LOWELL HARDIN  
NORMAN COLLINS  
FORD FOUNDATION  
NEW YORK CITY  
COUNTRY: USA

DATE: FEBRUARY 7, 1974

CLASS OF  
SERVICE: TELEX

TEXT:  
Cable No.:

- PAGE TWO -

COULD NOT BE MANAGED WITHIN THE TIME SPAN NOW ENVISAGED. THERE WOULD IN ANY CASE BE CONSIDERABLE RELUCTANCE ON THE PART OF MAJOR DONORS TO FINANCE HOUSING IN THE NUMBER OF UNITS SUGGESTED. EYE NOTICE ALSO THAT YOUR PLANNED LABORATORY SPACE IS ABOUT NINETY PER CENT MORE THAN TROPICAL INSTITUTE HAS AT CALI AND ABOUT TWENTY FIVE PER CENT MORE THAN TROPICAL INSTITUTE HAS AT IBADAN WHICH ALBRECHT DOES NOT EXPECT TO BE ABLE TO EMPLOY FULLY EVEN WHEN COMPLETELY STAFFED. SO THAT WE CAN DISCUSS THE BE MATTER IN HYDERABAD EYE WOULD/VERY GRATEFUL IF YOU COULD GIVE THOUGHT TO OPPORTUNITIES FOR REDUCING ANNUAL FUNDING REQUIREMENTS BOTH BY ABSOLUTE REDUCTIONS AND BY STRETCHING OUT CAPITAL PLAN TO LONGER TIME SPAN.

REGARDS

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture & Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

For Use By Communications Section

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: *[Signature]*



INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: LOVELL HANLIN  
NORMAN COLLINS  
FORD FOUNDATION  
NEW YORK CITY  
USA  
COUNTRY: USA  
TEXT:  
Cable No.:

DATE: FEBRUARY 7, 1974  
CLASS OF SERVICE: TELIX

- PAGE TWO -

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IN ANY CASE BE CONSIDERABLE RELUCTANCE ON THE PART OF MAJOR DONORS TO  
FINANCE HOUSING IN THE NUMBER OF UNITS SUGGESTED. THE NOTICE ALSO THAT  
YOUR PLANNED LABORATORY STAGE IS ABOUT NINETY PER CENT MORE THAN TROPICAL  
INSTITUTE HAS AT CALL AND ABOUT TWENTY FIVE PER CENT MORE THAN TROPICAL  
INSTITUTE HAS AT IBAHAN WHICH ALBRECHT DOES NOT EXPECT TO BE ABLE TO  
EMPLOY FULLY EVEN WHEN COMPLETELY STAFFED. SO THAT WE CAN DISCUSS THE  
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OPPORTUNITIES FOR REDUCING ANNUAL FUNDING REQUIREMENTS BOTH BY ABSOLUTE  
REDUCTIONS AND BY STRETCHING OUT CAPITAL PLAN TO LONGER TIME SPAN.

REGARDS  
GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:  
NAME: Harold N. Graves, Jr.  
DEPT: Agriculture & Rural Development  
SIGNATURE: *Harold N. Graves, Jr.*  
REFERENCE: SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

SECTION  
COMMUNICATIONS

FEB 7 11 17 AM 1974

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H G

ZCZC 248423 RC012 PD10287 RML4851 KNY741 BDS1085/4  
URWT HL INBX 063  
SECUNDERABAD 63 4 1900

FEBRUARY 4, 1974

Distribution: Mr. Graves  
Agriculture & Rural Dev.

LT

INTBAFRAD

WASHINGTON DC

COMMUNICATIONS  
SECTION  
FEB 5 11 05 AM 1974

RECEIVED

GRAVES WE ARE EXPLORING POSSIBILITIES INTERNATIONAL PROCUREMENT  
CONSTRUCTION MATERIALS STOP ATTEMPTED QUOTATIONS REINFORCING  
STEEL BROAD BASIS INTERNATIONALLY BUT FOUND LOCAL PURCHASE WITH GOI  
PRIORITY ALLOCATION MOST ADVANTAGEOUS STOP EXPECT SIMILAR SITUATION  
CEMENT STOP ARE EXPLORING WITH ARCHITECTS OTHER ITEMS  
DESIRABLE ADVANCE PURCHASE BY OWNER STOP WILL AWAIT YOUR LETTER  
FOR REPLY SUBJECT POSSIBLE SUBDIVISION CONTRACT TWO PARTS  
CUMMINGS CRISAT SECUNDERABAD

COL LT



43a

GILMARTIN  
INTBAFRAD  
NEW DELHI  
INDIA

FEBRUARY 1

TELEX

WOULD APPRECIATE YOUR GETTING ME ONE CONFIRMED SEAT INDIAN  
AIRLINES DELHI TO HYDERABAD MORNING FOURTEEN FEBRUARY RETURNING FROM  
HYDERABAD TO DELHI SEVENTEEN FEBRUARY. JUDY ALSO ARRIVING DELHI MORNING  
FOURTEEN LEAVING EIGHTEEN. REGARDS.

GRAVES

Harold N. Graves, Jr.

Agriculture and Rural Development

*Harold N. Graves, Jr.*

G3a

Mr. Robert S. McNamara

February 1, 1974

J. Burke Knapp

Proposal for Meeting ICRISAT Capital Budget

NOT ATTACHED

I have reported to Mr. Baum your negative views with respect to an IDA credit in support of the construction program of ICRISAT, and he has asked me to send you the attached memorandum which you received from Mr. Demuth in July 1972, together with your pencilled notations thereon. Mr. Baum says that these notations have been interpreted as favoring the principle of an IDA credit. I had seen the Demuth memorandum myself but I had forgotten about it when I talked to you. Warren tells me that in any case there is a good deal more work to be done before a final decision needs to be made on this, but I suggest that if your decision remains negative he should be told so immediately.

Attachment

  
JBKnapp:ism



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

~~BAC~~  
~~HG~~  
CJ  
Zin 1001

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

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

January 31, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

I wish to thank you very much for your letter of January 21, 1974 sending me the mailing list of Consultative Group members, and a calendar of Center and CGIAR events for 1974. I do now have some corrections for the ICRISAT meetings. The annual meeting of our Governing Board is still scheduled for May 30 through June 1. We are tentatively planning for a meeting of the Executive Committee in Washington on July 27. The ICRISAT Executive Committee will probably not meet on the September 26-28 date as previously indicated.

We are now planning to omit the meetings of the ICRISAT Program Committee and the UNDP Policy Advisory Committee meeting on May 24-25 and 27-28 respectively, and are tentatively postponing these until the time of the full Board meeting in January 1975.

We are now developing plans for two workshops, one on Farming Systems to be held during the period November 11-15, and the other on Grain Legumes (chickpeas and pigeon peas) December 16-20, 1974.

With very best regards, I am,

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

RWC:jg

INTERNATIONAL CROPS RESEARCH INSTITUTE  
FOR THE SEMI-ARID TROPICS

(ICRISAT)

1974 FEB 12 AM 9:21

CITY OFFICE :

1-11-326, Begumpet,

Hyderabad-500016, A. P., India

January 31, 1974

Phones : 72091, 72628

Grams : CRISAT, SECUNDERABAD.

Telex : ICRISAT 012-366

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

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We are now developing plans for two workshops, one on Farming Systems to be held during the period November 11-15, and the other on Grain Legumes (chickpeas and pigeon peas) December 16-20, 1974.

With very best regards, I am,

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

1974 FEB 11 AM 8:58

RWC:jg



43a

**OUTGOING WIRE**

TO: CUMMINGS  
- CRISAT  
SECUNDERABAD

DATE: JANUARY 31, 1974

CLASS OF SERVICE: LT / *pca*

COUNTRY: INDIA

TEXT:  
Cable No.:

YOUR LETTER TWENTYONE JANUARY. DO NOT FORESEE THAT LIMITATION OF CONSTRUCTION TO LOCAL CONTRACTORS WILL PRESENT ANY INSUPERABLE DIFFICULTIES TO DONORS. ON THE OTHER HAND THERE MAY BE CONSIDERABLE SCOPE FOR INTERNATIONAL PROCUREMENT OF MATERIALS APART FROM EQUIPMENT. <sup>ALSO</sup> WE WOULD LIKE YOU TO CONSIDER ONCE MORE WHETHER CONSTRUCTION NEEDS TO BE BROKEN IN TWO. IT IS POSSIBLE MONSOON WILL NOT PERMIT MUCH WORK ON FIRST PACKAGE BEFORE WORK ON SECOND IS READY TO BEGIN AND THAT THERE WOULD BE SOME ADVANTAGE IN SIMPLICITY AND ECONOMY IN HAVING ONE PACKAGE INSTEAD OF TWO. WILL WRITE YOU ON THESE AND OTHER POINTS. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

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JAN 31 8 24 PM 1974

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Checked for Dispatch: *SC*

230

INTERNATIONAL FINANCE CORPORATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

Form No. 21 (2-70)

OUTGOING WIRE

TO: CUMMINGS  
CRIST  
SECUNDERABAD

DATE: JANUARY 31, 1974

CLASS OF SERVICE: LT

230 /

COUNTRY: INDIA

TEXT: Cable No.

YOUR LETTER TWENTYONE JANUARY. DO NOT FORGET THAT LIMITATION OF CONSTRUCTION TO LOCAL CONTRACTORS WILL PRESENT ANY IMPERABLE DIFFICULTIES TO DONORS. ON THE OTHER HAND THERE MAY BE CONSIDERABLE SCOPE FOR INTERNATIONAL PROCUREMENT OF MATERIALS APART FROM EQUIPMENT WE WOULD LIKE YOU TO CONSIDER ONCE MORE WHETHER CONSTRUCTION NEEDS TO BE BROKEN IN TWO. IT IS POSSIBLE MONSOON WILL NOT PERMIT MUCH WORK ON FIRST PACKAGE BEFORE WORK ON SECOND IS READY TO BEGIN AND THAT THERE WOULD BE SOME ADVANTAGE IN SIMPLICITY AND ECONOMY IN HAVING ONE PACKAGE INSTEAD OF TWO. WILL WRITE YOU ON THESE AND OTHER POINTS. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

CLEARANCE AND COPY DISTRIBUTION

AUTHORIZED BY

NAME

Harold N. Graves, Jr.

DEPT

Agriculture and Rural Development

SIGNATURE

[Signature]

REFERENCE

HGraves: qpm

ORIGINAL (File Copy)

IMPORTANT: See Secretary's Guide for preparing form

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JAN 31 8 54 PM 1974

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Checked for Dispatch 25



File  
cc 9.3a

Mr. Robert S. McNamara

January 31, 1974

J. Burke Knapp

✓ - NOT ATTACHED

Please find attached for your approval a memorandum to the Executive Directors proposing certain interim grants to international agricultural research programs.

Please note paragraph 32 of this memorandum. You may know that a serious problem has arisen in the case of (ICRISAT) which needs some kind of advance commitment authority to let construction contracts which would in due course be financed by annual contributions from donor countries and agencies. It does not seem appropriate to meet this need through a Bank loan since this would require an Indian Government guarantee. It is therefore proposed to consider an IDA credit of about \$5 million for this purpose, which would (presumably) be amortized over a few years out of annual donor contributions. It is not yet clear whether this credit would have to be made before the end of this fiscal year.

Attachment.

JBK  
JBKnapp:vm

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: JANUARY 31, 1974

CLASS OF  
SERVICE: LT

COUNTRY: INDIA

TEXT:  
Cable No.:

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GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

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

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

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

January 28, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

We have had a very excellent visit from Mr. Thint this week and also a visit from a team from the USAID, Washington. I feel that both of these visits have been quite useful and I hope they have helped toward the resolution of some of the problems concerning our capital financing.

It is a pleasure to note from your letter of January 18 that you hope to visit ICRISAT for about three days sometime between February 15 and March 15. I indicated to Mr. Thint that I expect to be away myself for a meeting in London during the period February 17 through 20. I am sufficiently committed for the London meetings that I cannot easily avoid this. Otherwise, I expect to be in Hyderabad most of the time for the next few months. I have decided that I just cannot manage to attend the Institute Directors' meeting in Cali in early March and am asking Dr. Kanwar to represent ICRISAT in that meeting.

I have just had a letter from Peter Oram indicating that he expects to stop here for a couple of days, February 15 and 16.

Please let us know as soon as your travel plans are firmed up, and we shall be looking forward with real pleasure to having you visit with us.

Sincerely yours

  
Ralph W. Cummings  
Director

RWC:jg

RECEIVED  
COMMUNICATIONS  
SECTION  
JAN 31 1974

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

CITY OFFICE :  
1-11-226, Begumpet,  
Hyderabad-500016, A. P., India.

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

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Washington, D.C. 20433  
U.S.A.

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Sincerely yours

  
Ralph W. Cummings  
Director

SECTION  
COMMUNICATIONS

1974 FEB - 1 AM 11:37

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RWC:jg



~~BMC~~  
HQ.

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

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

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

January 24, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

Mr. Thint from the IBRD arrived here on Monday and we have also had our architects with us during the first part of the week. I believe that we have been able to provide Mr. Thint with most of the information he is seeking at this stage and that he will be able to report back to you the current situation of the Institute with reference to its planning for physical plant development.

Under our current schedule of planning, we hope to be ready to call for tenders for the main institutional buildings by around March 15. I believe that we will be able to make this date or at least come within a fairly close approximation to it. Allowing approximately six weeks for the preparation of tenders by potential contractors, we hope to have the tenders in hand some time during the first several days in May, and have the remainder of that month for our staff to review these in detail and prepare an analysis. We now have our full Board meeting scheduled in Hyderabad, May 30, 31 and June 1, at which time we expect them, among other things, to review and make final decisions on the recommended budget of ICRISAT for 1975, and to make decisions regarding the award of contracts for construction. If we can meet this schedule we should be ready to sign the contracts in early June and get the construction underway shortly thereafter. We recognize that this is a tight schedule but we are trying to do all we can to meet it. The contractors cannot begin the assembling of their labour, equipment, etc. and get the preparations made for construction until the contracts are signed. While the monsoon period will interfere slightly with some of their operations, the amount of rain we get during that period is not sufficiently large to hold them up very much. Thus any delay we have in signing the contract will set back our construction program by just that amount and with the very unsettled conditions in costs, both locally and internationally, it is likely to result in some additional escalation in cost. We are therefore anxious to proceed with the awarding of contracts and beginning of the construction program just as early as possible. As Mr. Thint will inform you we are already stockpiling our requirements of reinforcing steel and are obtaining information leading toward purchase of additional materials which we feel is advantageous for the Institute to purchase and supply to the contractors.

Mr. Harold Graves  
Washington, D.C., USA

2

January 24, 1974


We would not be able to award contracts until such time as we have assurance that we will have the funds available for carrying out the contracts. Therefore, we hope very much that the appropriate arrangements can be made to give assurance of a line of credit just as early as possible. It would be most helpful if this could be done prior to the meeting of our Board at the end of May so that we would not have to delay the award of contracts any period beyond that necessary to make the appropriate analysis of the bids and make the decision as to the successful bidder.

While the above schedule applies to the main institutional buildings, including the administrative offices, auditorium, library, laboratories, service buildings and dormitories, we do expect to award the contract for staff housing in a separate contract, which will probably not be ready until about a month or six weeks after the above schedule for the main institutional buildings. We are trying to shorten this delay just as much as possible and now believe we will be able to receive the tenders and award the contracts on staff housing as early as the 1st of July and hopefully a little bit earlier.

I have reviewed the copy of the internal memorandum which you prepared for Mr. Baum and Mr. Yudelman concerning the financing requirements. I agree with your analysis in this to the effect that the Institute would probably not have to draw on this line of credit with IDA prior to mid-1975 and the figures you gave as estimates for probable drawing on the line of credit do appear to be realistic. I believe that it would be necessary for us to have available, however, a somewhat larger amount in this line of credit if we are to award the full contracts, since at the time of the award, we will not have the firm commitments with reference to the 1975 and subsequent contributions from donors. As indicated in the meeting in Washington, October 31, 1973, I can see how this presents some problem to you in providing the assurance of the necessary contingent line of credit to enable us to go full speed-head with the physical plant development and at the same time not discourage early action by donors in providing the necessary funds year by year.

We greatly appreciate the efforts you are making to resolve these problems and hope very much that you can work them out in such a way that we can continue the development of the Institute without any hesitation or loss of momentum.

Sincerely yours

  
Ralph W. Cummings  
Director

RWC:jg



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1974 JAN 22 AM 8:32

COMMUNICATIONS  
SECTION

ZCZC 248423 RC087 PDB0418 RME8034 KNY672 BS46/22

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HYDERABAD 10 21 2035

January 21, 1974

CHEEK INTBAFRAD

WASHINGTONDC

ARRIVED HYDERABAD MONDAY JANUARY 21ST REGARDS

THINT

COL 21ST

Distribution:

Mr. Cheek  
Mr. Thint's Office

*Informed  
KMT's office,  
Jan. 22.*

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

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

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

January 21, 1974

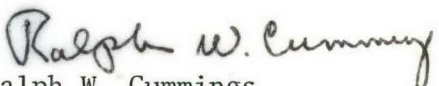
Mr. Harold Graves  
Executive Secretary  
Consultative Group on International Agric. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433

Dear Harold,

The Executive Committee of the ICRISAT Governing Board in its meeting in Hyderabad, January 17-19, had some discussion with reference to the principles which should be followed by the Institute in making salary adjustments for its international professional staff in view of the uncertain world conditions with respect to changing relative values of currencies and inflation. They have asked that I obtain as much information as I could from other agencies, and in particular from the IBRD, as to what, if any, formulae or principles are utilized in dealing with this question. Could you let me know whether or not the IBRD has any formula to take account of the inflation and changes in currency values in setting the salaries or making periodic adjustments in their salaries to take account of this very fluid situation? I need this information rather urgently and would greatly appreciate it if you could let me know as soon as possible whether or not the Bank has any such formulae or principles, and if so, what they may be.

With very best regards, I am,

Sincerely yours

  
Ralph W. Cummings  
Director

RWC:jg

COMMUNICATIONS

1974 JAN 23 3:31

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

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD  
Telex : ICRISAT 012-366

January 21, 1974

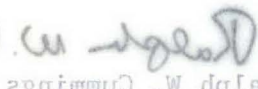
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Executive Secretary  
Consultative Group on International Agric. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433

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With very best regards, I am,

Sincerely yours

  
Ralph W. Cummings  
Director

SECTION  
COMMUNICATIONS

1974 JUN 29 PM 3:37

RWC:tg

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

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

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

January 21, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

The Executive Committee of the ICRISAT Governing Board, in its meeting in Hyderabad, January 17-19, 1974, reviewed the plans for tendering and preselection of contractors who would be requested to prepare tenders, and confirmed our decision to limit the bidding to Indian contracting firms. It felt that any other procedure would be impractical and would be almost certain to entail delays and increased costs at best. The Executive Committee asked me to obtain confirmation from the IBRD that it would present no difficulties from the point of view of the Bank in view of the possibility of partial IDA funding and the provision of the IDA line of credit for bridging financing. As you know, I did discuss this matter with Mr. John Lithgow and I had the definite impression that this would not create any problems. At the same time, I would like to have confirmation of this so that we would not be faced with any unforeseen problem later on.

I might say that at present we are anticipating dividing the tenders into two parts, the first to cover the institutional office and laboratory buildings, dining facility, library and the dormitories, and the second for staff housing. This division is for two reasons, namely, that this fits better the schedule of final completion of the architectural plans, and secondly that the architects feel we will be likely to get a better price on the housing portion of the contract through this procedure, than we would if we had it all in one single contract. I might say that the division into these two parts would further reduce the size of the individual contract to the point where it is likely to be less attractive to international bidders. This is not the reason for the division into the two parts but would perhaps have some bearing on the attractiveness to potential bidders outside India.

Would you please confirm to me at your early convenience the fact that the limitation to local contractors will present no problems insofar as the Consultative Group, the IDA or the IBRD are concerned?

Very truly yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

RWC:jg



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

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD,  
Telex : ICRISAT 012-366

JANUARY 21, 1974

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Ag. Research  
1818 H. Street, N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

The Executive Committee of the ICRISAT Governing Board, in its meeting in Hyderabad, January 17-19, 1974, reviewed the plans for tendering and preselection of contractors who would be requested to prepare tenders, and confirmed our decision to limit the bidding to Indian contracting firms. It felt that any other procedure would be impractical and would be almost certain to entail delays and increased costs at best. The Executive Committee asked me to obtain confirmation from the ICRD that it would present no difficulties from the point of view of the Bank in view of the possibility of partial IDA funding and the provision of the IDA line of credit for bridging financing. As you know, I did discuss this matter with Mr. John Litgow and I had the definite impression that this would not create any problems. At the same time, I would like to have confirmation of this so that we would not be faced with any unforeseen problem later on.

I might say that at present we are anticipating dividing the tenders into two parts, the first to cover the institutional office and laboratory buildings, dining facility, library and the dormitories, and the second for staff housing. This division is for two reasons, namely, that this fits better the schedule of final completion of the architectural plans, and secondly that the architects feel we will be likely to get a better price on the housing portion of the contract through this procedure, than we would if we had it all in one single contract. I might say that the division into these two parts would further reduce the size of the individual contract to the point where it is likely to be less attractive to international bidders. This is not the reason for the division into the two parts but would perhaps have some bearing on the attractiveness to potential bidders outside India.

Would you please comment to me at your early convenience the fact that the limitations on local contractors will present no problems insofar as the Consultative Group, the IDA or the ICRD are concerned?

Very truly yours

Ralph W. Cummings  
Director

RECEIVED  
JAN 29 10 37 AM '74



INCOMING CABLE

Log. 236

RECEIVED

BHO  
~~HG~~  
CJ  
Fu ICRISAT

1974 JAN 18 PM 2: 59

COMMUNICATIONS  
SECTION

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SECUNDERABAD 78 18 1615 PAGE 1/50

January 18, 1974

Distribution

Mr. Cheek  
Mr. Graves  
Agriculture & Rural Dev.

INTBAFRAD

WASHINGTONDC20523

REFERENCE BR 1153 CHEEK GRAVES CIVIL CONTRACTORS TO BE PREQUALIFIED  
EARLY FEB STOP ANTICIPATE GOING TO TENDER FOR INSTITUTIONAL  
BUILDINGS ON 15TH MARCH AND HOUSING 1ST MAY STOP ICRISAT  
ARCHITECTS AVAILABLE IN HYDERABAD 21 ST AND 22ND JAN STOP SUGGST

COL 20523 1153 15TH 1ST 21 ST 22ND SUGGEST

BS639/18 PAGE 2/28

ARCHITECT ARRIVAL HYDERABAD VIA BOMBAY ON TWA AS CONNECTIONS BETTER  
STOP ADVISE ARRIVAL TIMES AND FLIGHT NUMBERS INDIA SO INCRISAT CA  
-M ASSIST WITH LOCAL AIRLINE RESERVATIONS

CUMMINGS CRISAT/SECUNDERABAD



93a

January 18, 1974

Dear Ralph:

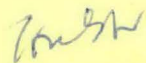
Many thanks for your cabled responses to our inquiries of recent days; they have been most helpful.

We have been getting down to cases on what would be the most appropriate method and timing for World Bank Group support of ICRISAT's capital budget during the period 1974-77, and expect to have a definite position on this before you call for tenders next March. Mr. Knapp, our Senior Vice President for Operations, would prefer not to enter into a formal commitment that early, because IDA funds already are over-committed for the year ending June 30, 1974. By that time, though, I think we will have a clear understanding with the management that a recommendation will be made to our board of Executive Directors for measures which in one way or another back up IDA's requirements through 1977.

In the meantime, we very much appreciate your willingness to be helpful to our architect, Kin Maung Thint, in getting information that will help us to make a presentation of ICRISAT's needs to the Executive Directors. I myself hope to be at ICRISAT for three days or so sometime between February 15 and March 15. If there is some period within these dates that would be especially inconvenient for you, please let me know.

Sincerely,

Harold Graves



Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16  
India

HG:mcj

## OFFICE MEMORANDUM

Yellow

93a

TO: Mr. Kin Maung Thint

DATE: January 18, 1974

FROM: Harold Graves

SUBJECT: INDIA: International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)  
Implementation Review Mission  
Terms of Reference

1. On or about January 19, 1974, you will proceed to Hyderabad, India, for a stay of about four days to visit the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), to review and discuss the implementation program for the physical facilities of the Institute and to determine the flow of funds needed for carrying out the program.

2. More specifically, you will review and discuss with the Director of ICRISAT (Dr. Ralph Cummings) and his staff and the project consultants:

- (a) Status of preparation of the architectural, engineering and bidding documents;
- (b) Proposals for packaging of bids, conditions of contracts, and procedures for payments;
- (c) Schedule of bidding, bid evaluation and contract awards;
- (d) Estimated costs of construction, with special attention to the possible effects of the energy crisis on construction costs;
- (e) Timing of the construction schedule with respect to the seasonal element;
- (f) Construction and procurement schedules and funding needs, particularly during 1974 and 1975, for its proper execution;
- (g) Such language as may be used in the ICRISAT bidding documents concerning the financing of construction and equipment and particularly concerning the participation of IDA in the financing; and
- (h) Proposed estimated schedule of disbursements for construction and equipment.

3. On your return to Washington, you will prepare a brief report on the findings of your mission. These findings will assist in the consideration of what it might be appropriate to recommend to the Executive Directors in the way of measures by IDA to insure that Institute disbursements for construction and equipment are covered.

cc: Messrs. Baum, Cargill, Knox & Yudelman  
KMT/HG/BMC:mcj



G3a

Yellow  
(corrected)  
copy

January 18, 1974

Dear Ralph:

Many thanks for your cabled responses to our inquiries of recent days; they have been most helpful.

We have been getting down to cases on what would be the most appropriate method and timing for World Bank Group support of ICRISAT's capital budget during the period 1974-77, and expect to have a definite position on this before you call for tenders next March. Mr. Knapp, our Senior Vice President for Operations, would prefer not to enter into a formal commitment that early, because IDA funds already are over-committed for the year ending June 30, 1974. By that time, though, I think we will have a clear understanding with the management that a recommendation will be made to our board of Executive Directors for measures which in one way or another back up ICRISAT's requirements through 1977.

In the meantime, we very much appreciate your willingness to be helpful to our architect, Min Maung Thint, in getting information that will help us to make a presentation of ICRISAT's needs to the Executive Directors. I myself hope to be at ICRISAT for three days or so sometime between February 15 and March 15. If there is some period within these dates that would be especially inconvenient for you, please let me know.

Sincerely,

Harold Graves

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16  
India

HG:mcj

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WUI016

NEW DELHI 82/81 17 1840 PAGE1/50

JANUARY 17, 1974

JAN 17 10 06 PM 1974

COMMUNICATIONS  
SECTION

INTBFRAD

WASHINGTONDC

Distribution:

Agriculture & Rural Development  
Mr. Kraske

24 FOR CHEEK INFORMED BY LEACH THAT ICRISAT ARCHITECTS WILL BE  
HYDERABAD

JANUARY 21 AND 22 ONLY STOP ICRISAT REQUESTS IBRD ARCHITECT  
VISIT HYDERABAD SAME TIME AND SUGGEST TRAVEL VIA BOMBAY ON TWA  
THEN BOMBAY HYDERABAD FLIGHT IA119 LEAVING BOMBAY JANUARY 21 AT  
0800 HOURS ARRIVING HYDERABAD 0915

COL 24 21 22 IA119 21 ~~2800~~ 0800 0915



PAGE2/31

HOURS STOP ICRISAT REQUESTING RESERVATION BOMBAY HYDERABAD AS  
INDICATED BUT SUGGEST REQUEST SAME RESERVATION ALSO FROM  
WASHINGTON STOP PLEASE URGENTLY CABLE INTBAFRAD NEW DELHI  
CONFIRMATION IBRD ARCHITECT TRAVEL PROGRAM REGARDS

GILMARTIN

COL CKD

G3a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
HYDERABAD

DATE: JANUARY 15, 1974

CLASS OF  
SERVICE: FULL RATE / PCC

COUNTRY: INDIA

TEXT:  
Cable No.:

REGARDING [ICRISAT] CONSTRUCTION PROGRAM AND FUNDING ARRANGEMENTS WE ENVISAGE NEED FOR BANK GROUP SHORTTERM FINANCIAL ASSISTANCE WHICH IS NOW BEING DISCUSSED IN BANK PRIOR TO SUBMISSION ANY SUCH PROPOSAL TO BANKS EXECUTIVE DIRECTORS STOP PLEASE CONFIRM SCHEDULE DATES FOR PREQUALIFICATION CONTRACTORS IF ANY AND SCHEDULE OF TENDERING DATES STOP IF TENDERING STILL SCHEDULED FOR MARCH THERE IS NEED FOR PROMPT ACTION SO AS TO GIVE ADEQUATE ASSURANCE TO CONTRACTORS RE MULTIYEAR AVAILABILITY FUNDS AND TO EXECUTIVE DIRECTORS ON ANY FINANCING PROPOSAL STOP WE FEEL IT IMPORTANT TO HAVE EARLY VISIT BY BANKS SENIOR ARCHITECT TO REVIEW CONSTRUCTION PLAN WITH YOURSELF AND CONSULTING ARCHITECTS INCLUDING IMPLEMENTATION SCHEDULE AND COST ESTIMATES STOP ARE AWARE OF USAID MISSION NEXT WEEK STOP GIVEN BANK STAFF WORK PROGRAM WOULD PROPOSE THAT KIN THINT VISIT ICRISAT FOUR FIVE DAYS BEGINNING MONDAY JANUARY TWENTYONE STOP APPRECIATE KNOWING IF TIMING CONVENIENT STOP AWAIT YOUR CABLE RESPONSE THIS PROPOSAL INCLUDING

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Bruce M. Cheek

DEPT. Agriculture & Rural Development

SIGNATURE *Bruce M. Cheek*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Baum  
Mr. Yudelman  
Mr. Knox  
Mr. Thint.

BMC:mcj

For Use By Communications Section

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: \_\_\_\_\_



132

Form No. 22  
(2-70)

INTERNATIONAL FINANCE CORPORATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OUTGOING WIRE

DATE: JANUARY 15, 1974

TO: CUMMINGS  
CRISAT  
HYDRABAD

CLASS OF SERVICE: FULL RATE

*1/15/74*

COUNTRY: INDIA

TEXT: Cable No.

REGARDING CRISAT CONSTRUCTION PROGRAM AND FUNDING ARRANGEMENTS WE  
 ENVIAGE NEED FOR BANK GROUP SHORTTERM FINANCIAL ASSISTANCE WHICH IS NOW  
 BEING DISCUSSED IN BANK PRIOR TO SUBMISSION ANY SUCH PROPOSAL TO BANKS  
 EXECUTIVE DIRECTORS STOP PLEASE CONFIRM SCHEDULE DATES FOR REQUALIFICATION  
 CONTRACTORS IF ANY AND SCHEDULE OF TENDERING DATES STOP IF TENDERING  
 STILL SCHEDULED FOR MARCH THERE IS NEED FOR PROMPT ACTION SO AS TO GIVE  
 ADEQUATE ASSURANCE TO CONTRACTORS RE MULTYEAR AVAILABILITY FUNDS AND TO  
 EXECUTIVE DIRECTORS ON ANY FINANCING PROPOSAL STOP WE FEEL IT IMPORTANT  
 TO HAVE EARLY VISIT BY BANKS SENIOR ARCHITECT TO REVIEW CONSTRUCTION PLAN  
 WITH YOURSELF AND CONSULTING ARCHITECTS INCLUDING IMPLEMENTATION SCHEDULE  
 AND COST ESTIMATES STOP ARE AWARE OF USALD MISSION NEXT WEEK STOP GIVEN  
 BANK EARLY WORK PROGRAM WOULD PROSE THAT KIN TRANT VISIT CRISAT FOUR  
 FIVE DAYS BEGINNING MONDAY JANUARY TWENTYONE STOP APPRECIATE KNOWING IN  
 TIMING COMMENT STOP AWAIT YOUR CABLE RESPONSE THIS PROPOSAL INCLUDING

NOT TO BE TRANSMITTED

CLEARANCES AND COPY DISTRIBUTION		AUTHORIZED BY:	
cc: Mr. Neam	cc: Bruce M. Cheek	NAME:	Bruce M. Cheek
Mr. Yubejan	Department: Agriculture & Rural Development	DEPT:	Agriculture & Rural Development
Mr. Knox		SIGNATURE:	<i>Bruce M. Cheek</i>
Mr. Taint		REFERENCE:	

COMMUNICATIONS  
JAN 15 9 03 PM 1974

ORIGINAL (File Copy)

DISPATCHED

(IMPORTANT: See Receiver's Guide for preparing form)

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
HYDERABAD

DATE: JANUARY 15, 1974

CLASS OF  
SERVICE: FULL RATE

COUNTRY: INDIA

TEXT:  
Cable No.:

-- PAGE TWO --

AVAILABILITY CONSULTING ARCHITECTS AND BEST ARRANGEMENTS FOR ACCOMMODATION  
INTERNAL TRAVEL AND PROPOSED MEETINGS STOP WELCOME YOUR CALLING ME ANYTIME  
AT BANK 202.477.3454 OR VIRGINIA HOME 703.941.1873 REGARDS

CHEEK  
SECRETARIAT  
INTBAFRAD

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Bruce M. Cheek

DEPT. Agriculture & Rural Development

SIGNATURE   
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

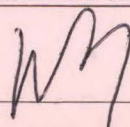
CLEARANCES AND COPY DISTRIBUTION:

BMC:mcj

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(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch: 



INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: CUMMINGS  
CRISAT  
HYDRABAD

DATE: JANUARY 15, 1974  
CLASS OF SERVICE: TOLL RATE

COUNTRY: INDIA

TEXT: Cable No.

-- PAGE TWO --

AVAILABILITY CONSULTING ARCHITECTS AND BEST ARRANGEMENTS FOR ACCOMMODATION  
INTERNAL TRAVEL AND PROPOSED MEETINGS STOP WELCOME YOUR CALLING ME ANYTIME  
AT BANK 202.677.3654 OR VIRGINIA HOME 703.941.1873  
REGARDS

CHEEK  
SECRETARIAL  
HYDRABAD

NOT TO BE TRANSMITTED

FOR USE BY COMMUNICATIONS SECTION

COMMUNICATIONS  
JAN 15 9 03 PM 1974

NAME: Bruce M. Cheek

DEPT: Agriculture & Rural Development

SIGNATURE: *Bruce M. Cheek*

SIGNATURE OF INDIVIDUAL AUTHORIZED TO REPRESENT THE ORGANIZATION

REFERENCE

ORIGINAL (File Copy)

(IMPORTANT: See Secretariat Guide for routing form)

DISPATCHED

*MW*

Checked for Dispatch

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

For ICRISAT

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

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

January 8, 1974

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

Dear Mr. Graves :

In response to your two cables concerning our revised capital expenditures as estimates, I have sent the following cable :

Quote  
1974 3 million including 168,000 as contingency and  
40,000 as external work contingency  
1975 6 million including 353,000 as contingency and  
40,000 as external work contingency  
1976 3.5 million including 300,000 as contingency and  
75,000 as external work contingency  
1977 2 million including 125,000 as contingency and  
25,000 as external work contingency STOP

Estimated Core Expenditures by Year -

1974 2.6 million including 100,000 as contingency  
1975 3.6 million including 85,000 as contingency  
1976 4.2 million including 59,000 as contingency  
1977 4.5 million including 75,000 as contingency

1973 Capital Expenditure was 1,767,366 dollars with  
carryover of 32,634 dollars STOP

1973 Core Expenditure was 1,202,313 dollars with over  
expenditure of 2,313 dollars

UNQUOTE -



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

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

January 8, 1974

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

Dear Mr. Graves :

In response to your two cables concerning our revised capital expenditures as estimates, I have sent the following cable :

Year	Estimated Core Expenditures by Year -	Quote
1974	3 million including 168,000 as contingency and 40,000 as external work contingency	1974
1975	6 million including 353,000 as contingency and 40,000 as external work contingency	1975
1976	3.5 million including 300,000 as contingency and 75,000 as external work contingency	1976
1977	2 million including 125,000 as contingency and 25,000 as external work contingency	1977

Estimated Core Expenditures by Year -

1974	5.6 million including 100,000 as contingency
1975	3.6 million including 85,000 as contingency
1976	4.2 million including 59,000 as contingency
1977	1.7 million including 75,000 as contingency

1973 Core Expenditure was 1,502,313 dollars with over  
carryover of 32,634 dollars 20P  
Capital Expenditure was 1,767,366 dollars with  
1974 JAN 18 AM 8:09  
COMMUNICATIONS SECTION

*That*

Mr. Harold Graves

Page ..2  
Jan. 8, 1974

This represents our best estimates as of the present time. I hope very much that this will supply you with the information needed in preparation of your recommendations to the Bank Management.

With very best regards, I am,

Sincerely yours,

  
Ralph W. Cummings  
Director

P.S. Contributions to ICRISAT in 1972-73 were somewhat in excess of our budget requirements. We are carrying forward a balance of \$465,312 in our un-restricted grant accounts, in addition to the amounts we have set aside as a reserve for the working capital funds.



WUI NY 620611

☎

INCOMING CABLE I  
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*BC*  
*CS file*

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COMMUNICATIONS  
SECTION

SECUNDERABAD 187/182 8 1845 PAGE 1/50

Distribution:

JANUARY 8, 1974

Mr. Graves  
Agriculture & Rural Dev.

LT

INTBAFRAD

WASHINGTONDC USA

GRAVES REURTEL SECOND JANUARY REVISED CAPITAL EXPENDITURES BY  
YEAR 1974 THREE MILLION INCLUDING ONE HUNDRED SIXTY EIGHT THOUSAND  
AS CONTIGNENCY AND FORTY THOUSAND AS EXTERNALWORK CONTINGENCY  
1975 SIX MILLION INCLUDING THREE HUNDRED FIFTYTHREE THOUSAND AS  
CONTINGENCY AND FORTY THOUSAND AS EXTERNAL WORK CONTIGNENCY 1976  
THREE POINT

COLL LT 1974 1975 1976

PAGE 2/50

FIVE

MILLION INCLUDING THREE HUNEDERD THOUSAND AS CONTIGNY AND  
SEVENTYFIVE THUSAND AS EXTERNAL WORK CONTINGENCY 1977 TWO MILLION  
INCLUDING ONE HUNDRED TWENTYFIVE THOUSAND AS CONTIGNENCY AND TWENTYFIVE  
THOUSAND AS EXTERNAL WORK CONTIGNENCY STOPESTIMATED CORE EXPENDITURES  
BY YEAR 1974 TWO POINT SIX MILLION INCLUDING ONE HUNDRED THOUSAND  
AS CONITIGNENCY 1975

DATE LINE AS RECEIVED.

COLL 1977 1974 1975

PAGE3/50

INCLUDING EIGHTYFIVE  
THOUSAND AS CONTIGENCY 1976 FOUR POINT TWO MILLION INCLUDING  
FIFTYNINE THOUSAND AS CONTIGENCY 1977 FOUR POINT FIVE MILLION  
INCLUDING SEVENTYFIVE THOUSAND AS CONTIGENCY STOP 1973 CAPITAL  
EXPENDITURE WAS ONE MILLION SEVEN HUNDRED SIXTYSEVEN THOUSAND THREE  
HUNDRED SIXTYSIX DOLLARS WITH CARRYOVER OF THIRTYTWO THOUSAND SIX

COLL 1976 1977 1973

PAGE4/32

HUNDRED THIRTY FOUR DOLLARS STOP 1973 CORE EXPENDITURE WAS  
ONE MILLION TWO HUNDRED AND TWO THOUSAND THREE HUNDRED THIRTEEN  
DOLLARS WITH OVER EXPENDITURE OF TWO THOUSAND THREE HUNDRED  
THIRTEEN DOLLARS

CUMMINGS CRISAT/SECUNDERABAD

COLL1973



G 3a

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

January 7, 1974

TO: ICRISAT Donors  
FROM: Executive Secretary  
SUBJECT: Funding of the Institute's Financial Requirements

1. You will remember that in the informal meeting of ICRISAT donors on October 31, Dr. Cummings was asked to look into the practicability of international bidding on the contracts for the construction of the Institute's physical plant. Dr. Cummings has now done so, and a letter from him on the subject is attached for your information.

2. Please note that in the informal memorandum of December 3, the United Kingdom should have been mentioned in paragraph 2 as being represented at the October 31 meeting.

Attachment

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

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

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

December 22, 1973

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

Dear Mr. Graves :

In response to your cable just received, I sent the following reply :

GRAVES CAN PURCHASE EQUIPMENT INTERNATIONAL BASIS BUT  
INTERNATIONAL BIDDING CIVIL WORKS CONSTRUCTION APPEARS  
IMPRACTICAL UNDER PRESENT CIRCUMSTANCES INDIA LETTER  
FOLLOWS - CUMMINGS

I obtained a copy of the IBRD Guidelines for Procurement and discussed the matter of international bidding with Mr. Lithgow in IBRD before leaving Washington. He informed me of the discussions that the Bank had been having with the Government of India regarding international bidding on civil works financed under bank loans, which had not yet been resolved. The size of this project is just over the break point at which international bidding is normally considered. If as now appears likely, we may have to break this into two parts; one for the institutional buildings and the other for housing - the size of each would be such as to make international bidding questionable. Mr. Lithgow was skeptical of the desirability of calling for international tenders for a project primarily concerned with civil works construction of the order of magnitude of our project, but did not discourage me from investigating the matter further in India. He indicated that negotiations between the Bank and the Government of India had resulted in a proposal whereby tenders by contractors outside India could be considered in case they were as much as 7 1/2% below the lowest Indian tender. This differential, however, had not been agreed to by the Bank Directors and the whole matter seems to be in abeyance for the time being.



Mr. Harold Graves

Page ..2  
Dec. 22, 1973

Upon return to India, I have talked with Mr. B.D. Pande, the Cabinet Secretary, and Mr. M.R. Shroff, Officer on Special Duty in the Department of Economic Affairs, Ministry of Finance, of the Government of India, raising with them the question of international tenders. They did not give a flat "no" but indicated that it would be very difficult for them at the present time, particularly in view of their unresolved discussions on this subject with the Bank. They pointed out that Indian contractors have executed quite successfully many projects much larger than this and that the Foreign Embassies and International Organizations had generally used Indian contractors for their civil works contracts. If there were a case in which the construction or the project were of such a specialized nature that it would be distinctly advantageous to have it done by a particular foreign firm, this could under normal circumstances be considered on its merits. I would find it difficult to say that the construction portion of this project could be described in that category.

After reviewing all of the factors, it is my conclusion that an attempt to put the Institute's buildings out for international tenders would entail considerable delay and that it would still be doubtful whether a foreign contractor could get the necessary clearances to carry out the contract even if he were to be successful in bidding. I have been unable to find clear-cut evidence that international bidding would result in any advantage to the Institute and considerable delay would probably result if such a procedure were followed. It is my conclusion that putting out the project for international tenders is just impractical at this stage and I am proposing to proceed on the basis of local tenders. I will present the full background on this to our Executive Committee when it meets here in Hyderabad, January 17-19, and feel confident that they will agree.

With warmest best wishes for the holiday season, I am,

Sincerely yours,

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

## OFFICE MEMORANDUM

*yellow**G3a*

TO: Mr. Baum and Mr. Yudelman

FROM: Harold Graves *HG*

SUBJECT: CGIAR: ICRISAT

DATE: January 4, 1974

1. The purpose of this memorandum is to review the background of a staff proposal that the World Bank Group, in effect, provide a standby for the financial requirements of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) while the Institute's physical installations at Hyderabad, India, are being completed, and to present some issues concerning that proposal.

2. ICRISAT is the first of the international agricultural research centers to have been established under the sponsorship of the Consultative Group on International Agricultural Research. It is a multiple-purpose center; it aims to develop farming systems that will improve agricultural productivity in the semi-arid tropics, and to improve the yield and quality of certain crops important in that ecological zone, namely: sorghum, millet, pigeon peas and chick peas. It came into existence in 1972. It is now gathering its staff and conducting some research activities in temporary buildings on its site.

3. Planning of the permanent installation also is in progress, and the management and Board of Trustees of ICRISAT hope that it will be possible to invite bids on construction in March 1974. The problem presented to the Bank and the Consultative Group for solution is to compose a financial arrangement that will enable ICRISAT to sign firm contracts, extending over a period of years, for the completion of the Institute's physical plant. It would be implicit in such an arrangement that the running costs of the Institute also would be met during the same period of time.

4. ICRISAT expects that it will have completed its capital installations during the years 1973-1977. It was originally expected that during that time the Institute's capital costs and operating (i.e., core) expenditures would be as follows:

	(\$'000,000)					
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
Core	1.2	2.6	3.6	4.2	4.2	
Capital	<u>1.8</u>	<u>3.0</u>	<u>6.0</u>	<u>2.0</u>	<u>0.5</u>	<u>13.3</u>
Totals	3.0	5.6	9.6	6.2	4.7	



January 4, 1974

5. In the summer of 1973, as a result of rising costs, and on the basis of plans submitted by architects retained by the Institute, the capital estimates were increased by \$3 million. ICRISAT's management believes that it also must revise the estimates of running costs to allow for rising prices, and expects to present new figures to its Executive Committee later this month.

6. The Director of ICRISAT has been asked to cable, for the period 1974-77, a year-by-year breakdown of capital costs and of running costs. In the meantime, the Secretariat has arbitrarily assigned the increase in capital costs to the last two years of the period, and has assumed that the increase in running costs, because of the slowness of staff build-up at ICRISAT, will be small (\$0.3 million) and will occur only in the last year. The figures, on this basis, are as follows:

	(\$'000,000)					
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total</u>
Core	1.2	2.6	3.6	4.2	4.5	
Capital	<u>1.8</u>	<u>3.0</u>	<u>6.0</u>	<u>3.5</u>	<u>2.0</u>	<u>16.3</u>
	3.0	5.6	9.6	7.7	6.5	

(Like the figures for other years, the figures for 1973 are estimates; and we know that the actual expenditure figures for that year differed considerably from the estimates.)

## II. The Proposal

7. In 1972, the Chairman of the Consultative Group (Mr. Demuth) initiated a proposal to Mr. McNamara that IDA be prepared to extend a line of credit to ICRISAT to enable the Institute in 1973 to enter into binding contracts for construction and equipment.

8. A memorandum from Mr. Demuth to Mr. McNamara observed that the capital costs of earlier institutes had been guaranteed by the American foundations which had founded those institutes but that ICRISAT had no such guarantee. It was likely that donors to ICRISAT, in the meeting of November 1973, would indicate their intentions of covering all of ICRISAT's capital costs (then roughly estimated at \$12 million). Most donors, however, could not make firm commitments covering the whole period of ICRISAT's

capital development, since what they pledged would be subject to parliamentary approvals and appropriations. Cases might occur in which donors might not be able to fulfill their intentions; and, in any case, there might be delays in disbursements for procedural reasons.

9. Mr. Demuth therefore proposed that IDA extend to ICRISAT a five-year, \$12-million line of credit, provided that the CG members' indications of intent amounted to at least that figure. If at any time IDA's resources from contributions made by CG members toward its capital costs should be insufficient to meet expenditures committed or authorized under its capital budget, ICRISAT would be entitled to draw on the line of credit. Drawings would incur the normal IDA service charge.

10. Mr. McNamara approved this proposal, in principle, on the premise that the necessary funds would be available from donors, and with the proviso that certain Executive Directors (specifically, from the U. S. and the U. K.) be consulted to insure that there would not be awkward difficulties with IDA's board.

### III. Availability of Funds

11. At the Consultative Group meeting of 1972, donors were not ready to offer the statements of intent that had been expected by Mr. Demuth. The matter therefore was taken up in a separate, informal meeting of ICRISAT donors held just before the Consultative Group meeting in November 1973 (summarized in my memorandum of December 3).

12. One conclusion from that meeting was that it would not, after all, be necessary for IDA to underwrite all the capital budget of ICRISAT, since it was not to be expected that the deficit which might be left by donor disbursements would amount to 100 per cent of the Institute's capital budget. A figure of \$5 million was suggested by participants in the informal meeting, and a still smaller figure conceivably might do.

13. The informal meeting left a reasonable presumption (although not a certainty) that the intended contributions of donors will add up to the amounts required by ICRISAT. On the basis of statements made in the informal meeting of donors and of information since received, and on the assumption that IDA itself will make substantial contributions to ICRISAT, the following financing can be envisaged:



	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1974-77</u>
Canada	1.800	0.800	0.600	0.500	
Germany	.485	0.600	0.600	0.600	
IDRC	.275	.275	.300	.325	
Norway	.435	.700	1.045	1.400	
Sweden	1.250	1.400	1.450	1.500	
Switzerland	.150	.160	.160	.170	
United Kingdom	.365	.375	.375	.385	
UNDP	.365	.375	.375	.395	
United States	1.000	1.400	1.970	1.625	
ICRISAT	1.165 <sup>a/</sup>				
IDA	<u>.350</u>	<u>1.000</u>	<u>.825</u>	<u>.600</u>	
Total	7.640	7.085	7.700	6.500	28.925
Requirement	3.800 <sup>b/</sup>	9.600	7.700	6.500	27.600
Net	3.840	-2.515	-	-	

a/ Carry-over of funds from 1973.

b/ Including a Secretariat estimate that \$0.8 million of capital requirements will be deferred from 1973 to 1974.

14. It is possible that this projection of available funds may be too optimistic. Future rates of inflation may exceed expectations. And one of the international consequences of the so-called energy crisis may be a diminution of development assistance programs which would affect the contributions of some donors to ICRISAT -- especially the United Kingdom, Norway and Sweden. On the other hand, there is a positive factor in that ICRISAT's estimates, over the period 1974-1977 include \$0.9 million of funds for contingencies which could be used to make up for deficiencies in donor performance.

#### IV. Attitudes of Executive Directors

15. In October, I visited the Executive Directors representing Germany (Dr. Janssen), the United Kingdom (Mr. Rawlinson) and the United States (Mr. Sethness) and put before each of them the possibility-

that a \$12 million line of credit might be proposed for the benefit of ICRISAT. Dr. Jenssen accepted the idea without reservations, but, in the other two instances, questions were raised.

16. Mr. Sethness had some difficulty in understanding my explanation of what might be proposed, but in the end said that he would refer the idea to the NAC staff with his own strong personal support.

17. Later, he gave me a hurried report (he was about to travel somewhere) on the reaction of the NAC staff. The staff thought that, while resort might ultimately have to be made to IDA, two other solutions should be considered first. One was that the Indian Government should be asked to cover shortfalls in IDA financing. The other was that if any funds were needed to cover deficits, they should be sought from a commercial bank.

18. I have not talked to Mr. Sethness about these suggested alternatives. With respect to the first, however, it can be said that it would not be appropriate to seek financing from India. ICRISAT is an international center, not an Indian center, and the benefits of its research are expected to extend far beyond the borders of India; in any case, the Indian Government already is making a notable contribution by providing the land for ICRISAT's headquarters and main research station. With respect to the second suggestion, it can be said that even if ICRISAT could obtain financing from a commercial bank (which might be doubtful), the Institute has no independent financial resources or credit base. A commercial bank would have to be paid back by the donors to ICRISAT, and the result of the transaction, because of interest payments, would be an extra cost to them.

19. Mr. Rawlinson at once raised the question of how the construction contracts for ICRISAT would be awarded. When I said that I thought the work would be done by Indian firms, he objected. He thought that if IDA money were going to be used, it should be used under the conditions generally attached to IDA funds, requiring international procedures for the placing of civil works contracts. He understood, of course, that this was an unsettled issue between IDA and India, and I inferred that he thought the ICRISAT matter could be used as one more means of putting pressure on the Bank Group management to insist on what he would regard as a satisfactory settlement.

20. Mr. Rawlinson did not accept my response, that the ICRISAT line of credit, in view of the unusual character of the borrower, would constitute an exceptional case to which normal rules did not need to apply. Apart from the matter of construction contracts, however, he did accept the general idea of a line of credit to ICRISAT.



21. In the informal meeting of ICRISAT donors at the end of October, Mr. Rawlinson's point about construction contracts was raised with Dr. Cummings, the Director-General of ICRISAT. It was the sense of the meeting, led in this respect by the representatives of Canada and the United Kingdom, that Dr. Cummings should investigate the procedures and feasibility of asking for international bids on construction contracts, and that he should adopt such procedures if they proved to be practicable and would not entail any substantial additional expense.

22. Dr. Cummings has reported in the last few days on the results of his inquiries, made in the World Bank (of Mr. Lithgow) and in India. He concludes that it is not practicable to proceed on the basis of international bidding. For one thing, it seems quite likely that there will be two contracts for the construction of two different elements in ICRISAT's capital plan, and each will be under the limit which the Bank considers to be a practical one for international bidding. This word has not been passed on to Mr. Rawlinson.

#### V. Points to be Decided

23. At the time of Mr. Demuth's memorandum in 1972, Mr. Broches agreed that there was no legal obstacle to IDA's extending a line of credit to ICRISAT. Under Section 2 (c) of its Articles of Agreement, IDA is authorized to lend to "a private entity in the territory of a member or members," and ICRISAT fits that description.

24. The form of the credit, however, would need to be more precisely determined. That would require decisions on the following points:

(a) How should the purpose of the credit be defined? Should the use of the credit be confined to the payment of capital costs (including equipment), or should it be generally applicable to the budget of ICRISAT? The former would add an element of difficulty to ICRISAT's already complicated task of combining and managing different streams of finance made available from different sources on differing terms; and it presumably would invoke all of IDA's detailed procedures for disbursement and accounting. The latter, I think, would be preferable; under it, funds would be disbursed to the Institute on its request (as is now the case with grants from most donors to the Institute).

(b) The original proposal for a 5-year line of credit

referred, I believe, to the period of five years (1973-1977) during which drawings might be made. After the passage of some time, however, it no longer seems necessary to think of a five-year period of drawings. The first year of the original five has passed, and adequate provision has been made for the second. A three-year period of drawing should be adequate -- say, from July 1, 1975 through June 30, 1978.

(c) The questions remain of the amount of the credit and the structure of the repayment schedule. It is possible only to guess what sum might be adequate, but the figure of \$5 million mentioned in the informal meeting seems at least adequate. If there is to be a three-year period of drawings, then a three-year period of grace would seem to be appropriate.

About the heaviest use of an IDA line of credit that can be imagined would amount to \$2 million of drawings in the first year of the credit and \$1 million in each of the next two, amounting to \$4 million in all. It would be unrealistic, I would guess, to suppose that repayment could be made at a rate higher than \$300,000 to \$400,000 a year, and such a figure would argue for a repayment period of from 10 to 13-1/2 years. Since during the grace period there would be no independent source of payments on the service charge, the amount of that charge during the grace period ought to be included in the drawings.

(d) The pattern of repayment, therefore, might be for a three-year grace period, followed by repayment over a period of 10 years or more. These terms would suit the needs of ICRISAT, but from the standpoint of IDA might be considered too generous. Against this, it might be argued that the amounts, in relation to IDA's total resources, would be very small. Or a level and fairly rigorous schedule of repayments, not graduated according to the amounts drawn, might be arranged, so that a small volume of drawings would be paid relatively quickly and a full repayment period of 10 years or more would be needed only if a large amount were drawn.

25. Another sort of question is whether IDA would follow its usual procedure of project appraisal -- especially including in this case, the capital plans of ICRISAT -- before extending the credit and would exercise its usual supervision procedure afterward. For supervision of the project, it would be appropriate for IDA to rely on the normal procedures of the Consultative Group. Whether provision should be made



for an IDA appraisal, however, is a point to be considered, bearing in mind that such an appraisal would be beyond the capacity of the Consultative Group Secretariat.

26. There may also be a question about the time at which a line of credit to ICRISAT should be proposed to the Board, assuming that management approval is forthcoming.

(a) Ideally, no doubt, the presentation should be made in conjunction with the recommendations to the Board on the distribution of IDA grants to the network of international agricultural research centers, including ICRISAT. We will not have a detailed version of ICRISAT's revised estimates of 1974-1977 financial requirements for another three weeks. If it were decided to do a project appraisal, it is difficult to imagine that a presentation could be completed as early as March 1. In either case, and especially the latter, such a postponement would defer IDA disbursements to the centers to an undesirably late date.

(b) On the other hand, if it were possible to combine the presentation of allocations with the line-of-credit proposal, such a combination would facilitate board discussion and presumably avoid complexities that would arise if the line of credit were highlighted as an individual and separate transaction.

(c) As a perhaps not very satisfactory compromise, full-scale presentation of the line of credit proposal could wait, but the essentials of the proposal could be described briefly as part of the allocations paper.

## VI. Next Steps

27. At whatever time, it remains

(a) to obtain specific management approval of a line of credit to ICRISAT. Is this a task for the Chairman of the Consultative Group?

(b) to prepare a draft credit agreement and any other appropriate documentation for a line of credit to ICRISAT. This might be done by the Secretariat; but the Chairman could appropriately set it in motion by convening a meeting which would bring together the appropriate parts of the staff (Agriculture and Rural Development, Legal and Controllers).

(c) to touch base with Messrs. Sethness and Rawlinson. These contacts were initiated by the Secretariat; but particularly in the case of Mr. Rawlinson, it might be a useful tactic to carry on the next bit of dialogue at a higher level, perhaps with the help of Mr. Hoffman or the Chairman.

cc: Mr. Hoffman  
Mr. Wiehen  
Mr. Delaune/Mr. Asser  
Mr. Street/Mr. Diamond  
Mr. Kraske  
Dr. Cummings  
Mr. Melville

HGraves:apm



93a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: JANUARY 4, 1974

CLASS OF *LT/Telex*  
SERVICE: ~~ICRISAT 015-366~~

COUNTRY: INDIA

TEXT:  
Cable No.:

IN ADDITION TO BUDGET INFORMATION REQUESTED MY CABLE EARLIER  
THIS WEEK WOULD BE HELPFUL TO HAVE FOR 1973 YOUR BEST ESTIMATE  
OF WHAT WAS SPENT ON CAPITAL BUDGET AND HOW MUCH OF INTENDED 1973  
CAPITAL EXPENDITURES WERE DEFERRED TO 1974. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

**ORIGINAL (File Copy)**

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Lewis, P&B

For Use By Communications Section

Checked for Dispatch: *[Signature]*

230

INTERNATIONAL DEVELOPMENT ASSOCIATION

RECONSTRUCTION AND DEVELOPMENT BANK FOR INTERNATIONAL BANK FOR

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: CUMINGS

CRYST SECUNDERABAD

DATE JANUARY 4, 1974

CLASS OF SERVICE: ~~TELEX~~ ~~TELETYPE~~ ~~TELETYPE~~ ~~TELETYPE~~

COUNTRY: INDIA

TEXT Cable No.

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Mr. Lewis, P&B

COMMUNICATIONS

Harold N. Graves, Jr.

JAN 4 11 36 PM 1974

Agriculture and Rural Development

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Graves: sqm

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Checked for Dispatch



93a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: JANUARY 2, 1974

CLASS OF  
SERVICE: LT / RCA

COUNTRY: INDIA

TEXT:  
Cable No.:

FOR PURPOSES OF PUTTING RECOMMENDATION TO BANK MANAGEMENT CONCERNING  
ICRISAT STANDBY COULD YOU GIVE ME AN INDICATION OF YOUR REVISED ESTIMATED  
CAPITAL EXPENDITURES FOR INDIVIDUAL YEARS FROM SEVENTY FOUR THROUGH END OF  
CONSTRUCTION AND REVISED ESTIMATED CORE EXPENDITURES FOR SAME PERIOD. WOULD  
ALSO LIKE IF POSSIBLE TO HAVE CONTINGENCY FUNDS STATED SEPARATELY RECOGNIZING  
THAT YOU HAVE THREE CONTINGENCY ITEMS ONE FOR CORE ONE FOR CAPITAL AND A  
THIRD UNDER CAMPUS EXTERNAL WORK. EYE REALIZE THAT THIS MAY NOT BE POSSIBLE  
AND THAT IN ANY CASE THE FIGURES HAVE STILL TO BE CONSIDERED BY YOUR EXECUTIVE  
COMMITTEE. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

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INTERNATIONAL FINANCIAL CORPORATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OUTGOING WIRE

DATE: JANUARY 2, 1974

TO: CUMMINGS  
CRIST  
SECUNDERABAD

CLASS OF SERVICE: RT  
*RTA*

COUNTRY: INDIA

TEXT

Cable No.

FOR PURPOSES OF PUTTING RECOMMENDATION TO BANK MANAGEMENT CONCERNING  
 ICRIAT STANDBY YOU GIVE ME AN INDICATION OF YOUR REVISED ESTIMATED  
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 AND THAT IN ANY CASE THE FIGURES HAVE STILL TO BE CONSIDERED BY YOUR EXECUTIVE  
 COMMITTEE. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

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cc: Mr. Lewis, P&B

AUTHORIZED BY: *Harold N. Graves, Jr.*  
 NAME: Harold N. Graves, Jr. COMMUNICATIONS  
 DEPT: Agriculture and Rural Development  
 SIGNATURE: *Harold N. Graves, Jr.*  
 SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE: *Harold N. Graves, Jr.*

8 58 PM 1974

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NGRaves: qpm

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70



G3a

December 27, 1973

Dear Fred:

Here is the draft minute of the meeting we had on ICRISAT at the end of October. We are now just beginning work on recommendations to our management, and it may be 10 days or more before we know what to expect concerning the proposal that IDA underwrite ICRISAT during the Institute's construction period. I am optimistic, but not certain, about the outcome.

Sincerely,

Harold Graves

Enclosure - Memo of Dec 3. ICRISAT Donors.

Professor C. F. Bentley  
Professor of Soil Sciences  
University of Alberta  
Edmonton 7, Alberta  
Canada

*HG*

HGraves:apm

WUI NYK

INCOMING CABLE

Log 107

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12/26 / ~~Mr. Cheek~~  
V. H. Graves

DEC 23 12 37 PM 1973

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DECEMBER 22, 1973

Distribution:

Agriculture & Rural Development  
Mr. Kraske

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MCS

Our file

ICRISAT

msk

GRAVES CAN PURCHASE EQUIPMENT INTERNATIONAL BASIS BUT  
INTERNATIONAL BIDDING CIVIL WORKS <sup>FOR</sup> CONSTRUCTION APPEARS  
IMPRACTICAL UNDER PRESENT CIRCUMSTANCES INDIA LETTER  
FOLLOWS

CUMMINGS CRISAT SECUNDERABAD

cc: Mr. Graves

COLL WASHINGTON DC



G 30

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

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

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

December 22, 1973

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

Dear Mr. Graves :

In response to your cable just received, I sent the following reply :

GRAVES CAN PURCHASE EQUIPMENT INTERNATIONAL BASIS BUT  
INTERNATIONAL BIDDING CIVIL WORKS CONSTRUCTION APPEARS  
IMPRACTICAL UNDER PRESENT CIRCUMSTANCES INDIA LETTER  
FOLLOWS - CUMMINGS

I obtained a copy of the IBRD Guidelines for Procurement and discussed the matter of international bidding with Mr. Lithgow in IBRD before leaving Washington. He informed me of the discussions that the Bank had been having with the Government of India regarding international bidding on civil works financed under bank loans, which had not yet been resolved. The size of this project is just over the break point at which international bidding is normally considered. If as now appears likely, we may have to break this into two parts; one for the institutional buildings and the other for housing - the size of each would be such as to make international bidding questionable. Mr. Lithgow was skeptical of the desirability of calling for international tenders for a project primarily concerned with civil works construction of the order of magnitude of our project, but did not discourage me from investigating the matter further in India. He indicated that negotiations between the Bank and the Government of India had resulted in a proposal whereby tenders by contractors outside India could be considered in case they were as much as 7 1/2% below the lowest Indian tender. This differential, however, had not been agreed to by the Bank Directors and the whole matter seems to be in abeyance for the time being.

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

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.  
Telex : ICRISAT 012-366

December 22, 1973

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

Dear Mr. Graves :

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FOLLOWS - CUMMINGS

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India could be considered in case they were as much as 7 1/2% below  
the lowest Indian tender. This differential, however, had not been  
agreed to by the Bank Directors and the whole matter seems to be in  
abeyance for the time being.



Mr. Harold Graves

Page ..2  
Dec. 22, 1973

Upon return to India, I have talked with Mr. B.D. Pande, the Cabinet Secretary, and Mr. M.R. Shroff, Officer on Special Duty in the Department of Economic Affairs, Ministry of Finance, of the Government of India, raising with them the question of international tenders. They did not give a flat "no" but indicated that it would be very difficult for them at the present time, particularly in view of their unresolved discussions on this subject with the Bank. They pointed out that Indian contractors have executed quite successfully many projects much larger than this and that the Foreign Embassies and International Organizations had generally used Indian contractors for their civil works contracts. If there were a case in which the construction or the project were of such a specialized nature that it would be distinctly advantageous to have it done by a particular foreign firm, this could under normal circumstances be considered on its merits. I would find it difficult to say that the construction portion of this project could be described in that category.

After reviewing all of the factors, it is my conclusion that an attempt to put the Institute's buildings out for international tenders would entail considerable delay and that it would still be doubtful whether a foreign contractor could get the necessary clearances to carry out the contract even if he were to be successful in bidding. I have been unable to find clear-cut evidence that international bidding would result in any advantage to the Institute and considerable delay would probably result if such a procedure were followed. It is my conclusion that putting out the project for international tenders is just impractical at this stage and I am proposing to proceed on the basis of local tenders. I will present the full background on this to our Executive Committee when it meets here in Hyderabad, January 17-19, and feel confident that they will agree.

With warmest best wishes for the holiday season, I am,

Sincerely yours,

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

93a

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD  
*Hyderabad*  
INDIA

DATE: DECEMBER 20, 1973

CLASS OF  
SERVICE: FULL RATE

COUNTRY:

*RC*

TEXT:  
Cable No.:

BEGINNING PAPER FOR MANAGEMENT AND BOARD ON WORLD BANK GROUP SUPPORT  
OF RESEARCH CENTERS. NEED TO KNOW BY RETURN CABLE WHETHER YOU HAVE HAD  
TIME TO INVESTIGATE QUESTION OF INTERNATIONAL BIDDING ON ICRISAT CONSTRUCTION  
AND WITH WHAT RESULTS. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. Agriculture and Rural Development

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves:apm

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INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: CUMMINGS

ICISAT  
SECUNDERABAD

*Hyderabad*

COUNTRY: INDIA

TEXT:  
Cable No.:

DATE: DECEMBER 20, 1973

CLASS OF SERVICE: FULL RATE

*llc*

BEGINNING PAPER FOR MANAGEMENT AND BOARD ON WORLD BANK GROUP SUPPORT  
OF RESEARCH CENTERS. NEED TO KNOW BY RETURN CABLE WHETHER YOU HAVE HAD  
TIME TO INVESTIGATE QUESTION OF INTERNATIONAL BIDDING ON ICISAT CONSTRUCTION  
AND WITH WHAT RESULTS. REGARDS.

GRAVES

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT.

Agriculture and Rural Development  
DEC 20 3 46 PM 1973

SIGNATURE

*Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

IGraves: spm

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*Foreign and Commonwealth Office*  
**OVERSEAS DEVELOPMENT ADMINISTRATION**  
Eland House Stag Place London SW1

Telephone 01 - 828 4366 ext

The Executive Secretary  
Consultative Group on International  
Agricultural Research  
1818 H Street NW  
Washington DC 20433  
USA

Your reference

Our reference NRA 204/210/02

Date 14 December 1973

ICRISAT DONORS' MEETING, WASHINGTON, OCTOBER 31 1973  
Funding of the Institute's Core and Capital Budgets

Dear *Harold*,

I have the following comments on the record of the above meeting dated December 3, 1973:

- a) In paragraph 2 attendance by United Kingdom representatives has been omitted and I should be grateful if this could be corrected. I myself attended the meeting for its duration and was for part of the time accompanied by Dr Cunningham.
- b) I also feel that the record does not bring out clearly enough the discussion we had on the involvement of IDA funds in connection with ICRISAT problems. I think that my best course is to quote from my own notes made at the time of the meeting. I am not suggesting that you take these too seriously but I think they may indicate rather more clearly some of the questions that were worrying both the Director and donors round the table.

"The Canadian delegate raised the issue of international tenders in line with usual IDA policy in relation to India. In view of the fact that IDA would be performing the role of residual donor the Bank staff agreed to study this question especially in relation to the ICRISAT Agreement with India. The question of tendering procedures may not have been covered fully in this document, though it was pointed out that ICRISAT would be free to import any supplies and equipment necessary, e.g. they are already importing steel for construction purposes. It was further agreed that the Secretariat would produce a carefully worded statement which would be circulated to all donors attending the meeting. This would distinguish clearly between

- (i) funds that IDA might provide in the form of bridging finance to carry ICRISAT in its construction programme over periods when other donors contributions might be delayed, and

/(ii)





- (ii) the question of the IDA standby fund which might be required to make up actual deficits in the funds available. It was recognised that this document would need to be very carefully worded and checked with legal authorities.

There was some argument about the amount of money which would be required for the bridging fund. I believe that a figure of US \$11 million was mentioned. The Canadian delegate made a good point when he said that a bridging fund of this magnitude might indicate to donors that their contributions were not so desperately needed and recommended the reduction of this to US \$6 million. Dr Cummings was concerned, however, to ensure that whatever the outcome the ICRISAT Board would be able to sign contracts for the amounts required when the time came and to satisfy everyone concerned that adequate funds would in fact be available to meet the commitments."

- c) In paragraph 13 of the record mention is made of a paper which will be put to the IDA Board. I am not sure whether this is the same paper that is mentioned in my above quotation. If so I would have thought it more appropriate for this paper to be circulated to donors before it is put forward.
- d) Another matter which I would like recorded is the Chairman's reply to my question about the interest rate that would be charged for drawings on the bridging fund. The figure I noted was  $\frac{3}{4}$  per cent.

Otherwise the document is satisfactory from my point of view.

Yours sincerely

*Ralph*

A R Melville

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.

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

December 5, 1973

Mr. Harold Graves, Executive Secretary  
Consultative Group on International Agric. Research  
1818 H. Street N.W.  
Washington, D.C. 20433  
U.S.A.

Dear Harold,

I am sending herewith a copy of a publication entitled "Our Agricultural Future" based on a series of lectures delivered by Dr. M.S. Swaminathan, Director General, Indian Council of Agricultural Research, New Delhi. I thought you and your associates might find this of interest.

Sincerely yours

  
Ralph W. Cummings  
Director

Encl:

PS.

I am enclosing an advanced copy of the booklet "THIS IS ICRISAT". When additional copies are received from the printers, I will send you some.

R W C

VB:jg

1013 Dec 15 11:15:23

RECEIVED



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

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

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.

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When additional copies are received from the printers, I will  
send you some.

R W C

VB:js

1973 DEC 12 PM 12:53

RECEIVED

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

yellow - 43a

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

December 3, 1973

TO: ICRISAT Donors  
FROM: Executive Secretary  
SUBJECT: Funding of the Institute's Core and  
Capital Budgets

1. A group representing donors to ICRISAT, together with Dr. Ralph Cummings, the Director-General of ICRISAT, held an informal meeting in the headquarters of the World Bank on October 31, 1973. The purpose of the meeting was to discuss the funding of the Institute's core and capital budgets during the period of construction of ICRISAT (approximately 1973-1977).

2. The meeting was attended by representatives of Canada, The Ford Foundation, Germany, the International Development Research Centre, Sweden, Switzerland, the United Nations Development Programme, and by Mr. Demuth, who had served as Chairman of the ICRISAT Subcommittee of the Consultative Group, Mr. Graves, the Executive Secretary of the Group, and Dr. Cummings. Mr. Demuth presided.

3. The needs of ICRISAT over the period 1973-1977 were summarized by the Secretary and Dr. Cummings, as follows (in \$'000,000):

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Core	1.2	2.6	3.6	4.2	4.5
Capital	<u>1.8</u>	<u>3.0</u>	<u>6.0</u>	<u>3.5</u>	<u>2.0</u>
	3.0	5.6	9.6	7.7	6.5.

4. Dr. Cummings gave a brief progress report on staffing and on the planning of physical facilities at the Center. The architects had been instructed at the end of September to proceed with detailed designs and drawings; and it was expected that these would be ready by the end of the year. It was expected that tenders would be invited in March and that the Board of Trustees would meet on contract awards in May.

5. A question was raised about sources of procurement. Dr. Cummings replied that most of the technical equipment would be ordered outside India, but that he expected the construction contracts to be carried out by Indian firms.



6. Some donor representatives observed that the case for ICRISAT might be more impressive to their authorities if ICRISAT were to invite international bidding on construction -- provided that such a course of action was practical and would not involve any considerable additional expense. Dr. Cummings agreed to investigate the matter to see what was feasible in this respect.

7. The Chairman reminded participants that a proposal had been made in 1972 to the World Bank's management that the International Development Association (IDA) of the World Bank Group should be ready to provide temporary funding to ICRISAT to offset interruptions that might occur in cash flow from donors. The management had agreed in principle, subject to informal discussions with some Executive Directors (which had been carried on by the Secretariat) and subject to the condition that donors indicate their intentions to provide sufficient funds to meet ICRISAT's needs.

8. Participants in the meeting gave indications of the financing they expected their governments or organizations to be able to make available to ICRISAT. Several explained, however, that they would still have to obtain formal approval from parliamentary or other authorities, mostly on a year-by-year basis, for the years beginning in 1975.

9. Subject to these qualifications, the following indications of support were given (in \$'000,000) for the period 1974-1977:

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Canada	1.800	0.800	0.600	0.500
Germany	.485 <sup>a/</sup>	0.500		
IDRC	.275	0.275		
Sweden	1.250			
Switzerland	.150	0.160		
United Kingdom	.365	0.375	0.375	
UNDP	.650	.850	.800	.750
United States	1.000 <sup>b/</sup>			
ICRISAT	.800			

<sup>a/</sup> Following the informal ICRISAT meeting, the German representative indicated the possibility of allocating an additional \$365,000 equivalent to ICRISAT for 1973.

<sup>b/</sup> Carry-over from 1973, which presumably would be increased as a result of <sup>a/</sup>.

10. The Chairman remarked that, as against ICRISAT's needs of around \$29 million for 1974-77, he estimated availabilities of approximately \$24 million. He ascribed the following amounts to particular donors (in \$'000,000):

Canada	3.7
Germany	2.0
IDRC	1.0
Sweden	5.0
Switzerland	0.64
UNDP	3.1
United Kingdom	1.44
United States	7.00.

He thought that additional sums might be forthcoming from the Asian Development Bank, Denmark, Japan, Norway and IDA.

11. The Secretary observed that ICRISAT might be faced with a particularly critical situation in 1975. The prospective shortfall in that year appeared to be on the order of \$2.5 million.

12. Several participants stressed their expectation that IDA not only would provide temporary accommodation to cover cash-flow problems that might develop for ICRISAT, but would be an actual donor to ICRISAT as well. They also observed that, in so far as temporary accommodation was concerned, it would not be necessary for IDA to provide cover for ICRISAT's entire financing in the period 1974-77, but only for some fraction of it -- say, \$5 million.

13. The Secretary said that the question of IDA's role would be taken up with the management following the informal meeting, and that a proposal to the IDA Board might be made in December. Some participants expressed concern that the presentation to the Board not indicate that donors had undertaken commitments for years for which it was not yet possible for them to do so. They said that, in any case, they would appreciate receiving copies of the paper going to the IDA Board, so that they could assure that the Executive Directors representing their governments were appropriately briefed on the issues.



Memo to ICRISAT Donors

Subject: Funding of the Institute's Core and  
Capital Budgets - dated Dec. 3, 1973

cc to:

Mr. Ian Robertson  
Mr. J. H. Hulse  
Mr. A. R. Melville  
Dr. Ralph W. Cummings  
Dr. Lowell S. Hardin  
Dr. Werner Treitz  
Mr. Arnold Willen  
Dr. Rolf Wilhelm  
Mr. Joel Bernstein  
Mr. William T. Mashler

Mr. Demuth  
Mr. Baum  
Mr. Yudelman  
Mr. Ruddy/Lewis  
Mr. Cheek

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

Feb

Phones : 72091, 72628  
Grams : CRISAT, SECUNDERABAD.

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

November 29, 1973

Mr. Harold Graves  
Secretary  
The Consultative Group on International  
Agricultural Research  
Washington, D.C., U.S.A.

Dear Harold,

I wish to thank you very much for your letter of November 19 enclosing the transcript of the meetings of the Consultative Group held in Washington recently. I wish to thank you further for the summary regarding the statement of intentions of the various agencies for support of ICRISAT. This is indeed encouraging. It is gratifying also to know about the additional contribution of the German Ministry of Cooperation this year which we may use for creating a capital working fund. This is also a very fortunate circumstance and we appreciate your help in getting this set up.

I shall be looking forward to receiving the draft minutes of the special meeting on ICRISAT capital financing.

We have completed and published a small leaflet describing ICRISAT, and I am sending several copies for your use. We also have in print a somewhat more complete brochure on the Institute which we hope to have out within a couple of weeks. When this is out, we will also send you some copies of this. We had Dr. W.B. Ward of Cornell University as a consultant on information services for a few weeks in late September and early October. These two leaflets are the product of the work while he was here. I trust that you will find them useful. We can send additional copies should you have need for them.

With warmest regards and best wishes, I am,

Sincerely yours

*Ralph W. Cummings*  
Ralph W. Cummings  
Director

RWC:jg



93a

November 19, 1973

Dear Ralph:

With this letter, I am sending a transcript of what members of the Consultative Group said, during their meeting early this month in Washington, about the grants they intend to make to the international agricultural research institutes for 1974. The statements show (if my arithmetic is correct) intentions to make the equivalent of about \$5,975,000 available to ICRISAT. In addition, the Norwegian representative indicated a continuing interest in ICRISAT; and the Secretariat will recommend that the Norwegian allocation to ICRISAT for 1974 should be not less than an amount equivalent to \$200,000.

Following the meeting, it was indicated that the German Ministry of Cooperation might be willing to make an additional grant of DM 850,000 (about \$345,000) to ICRISAT for 1973, and that it would be possible for this amount to be used to create a working capital fund (which, needless to say, might be very important to ICRISAT in 1975).

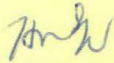
I have yet to finish a draft of the minutes of our special meeting on ICRISAT, but hope to do so in a day or two, and will of course send you a copy for comment and corrections.

Sincerely,

Harold Graves

Enclosure

Dr. Ralph W. Cummings  
Director  
ICRISAT  
1-11-256, Begumpet  
Hyderabad 16., A. P.  
India



HGraves :apm



# Record Removal Notice

<b>File Title</b> CGIAR - G-7 - International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) - Correspondence 72/74-04		<b>Barcode No.</b>  1760849		
<b>Document Date</b> November 9, 1973	<b>Document Type</b> Memorandum			
<b>Correspondents / Participants</b> To: Files From: Harold Graves				
<b>Subject / Title</b> ICRISAT Bank Account				
<b>Exception(s)</b> Financial Information iv				
<b>Additional Comments</b>		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><b>Withdrawn by</b> Sherrine M. Thompson</td><td><b>Date</b> April 12, 2021</td></tr></table>	<b>Withdrawn by</b> Sherrine M. Thompson	<b>Date</b> April 12, 2021
<b>Withdrawn by</b> Sherrine M. Thompson	<b>Date</b> April 12, 2021			





## OFFICE MEMORANDUM

93a  
Sp.

TO: Mr. Demuth

FROM: Harold Graves *HG*

SUBJECT: ICRISAT meeting

DATE: October 31, 1973

1. I believe that what we ought to try to achieve in this meeting is a common understanding by donors of the funding problem that lies ahead of ICRISAT in the next few years (1975-1977).

2. It seems doubtful that we can get donor expressions of intent at this meeting (apart from a possible declaration by USAID on the basis of its 25 per cent formula), since donors presumably will need further time to consider what they can do. It would be important, however, to agree on some follow-up to the meeting, so that we can construct some kind of financial plan for ICRISAT. The further procedure for arriving at such a plan is a point for discussion.

3. Such a plan ought to be in existence by the end of this year. If Cummings is to be put in a position to invite tenders on construction in February, we must have such a plan by the end of 1973, in order to give time for the consideration of a stand-by arrangement by the IDA Board.

4. As far as the figures are concerned, they have been modified since the tabulations which Cummings gave us in August. It is estimated that the capital costs of the Institute over the period to 1977 are likely to be \$16.4 million, or \$3 million higher than originally thought.

5. Cummings is not able to say how the extra \$3 million will fall, year by year. I propose that half this amount be assigned arbitrarily to each of the last two years (1976 and 1977) of the span under consideration.

6. On this assumption, the ICRISAT financial requirements would be as follows:

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	
Core	1.2	2.6	3.6	4.2	4.25	12.5
Capital	<u>1.8</u>	<u>3.0</u>	<u>6.0</u>	<u>3.5</u>	<u>2.0</u>	11.5
	3.0	5.6	9.6	7.7	6.25	

We can take it that requirements through 1974 will be met; our discussion needs to concentrate on 1975-1977.

cc: Mr. Baum  
Mr. Yudelman

HGraves:apm



## OFFICE MEMORANDUM

*yellow  
file  
copy  
G3a*

TO: Mr. Demuth

FROM: Harold Graves *HG*

SUBJECT: ICRISAT meeting

DATE: October 31, 1973

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	3.0	5.6	9.6	7.7	6.2

We can take it that requirements through 1974 will be met; our discussion needs to concentrate on 1975-1977.

cc: Mr. Baum  
Mr. Yudelman

HGraves:apm

INCOMING TELEX

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OCT 30 11 19 AM 1973

COMMUNICATIONS  
SECTION

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(Mr. Check)  
is a  
copy

OCTOBER 30, 1973

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INTBAFRAD WSH

FROM OSLO

16548 NORAD N

FOR GRAVES. YRTEL 15 OCTOBER MEETING ICRISAT 31 OCTOBER.

REGRET TO INFORM YOU THAT NORAD IS UNABLE TO PARTICIPATE.

E. DINGSTAD

30.10.73

☒

INTBAFRAD WSH

16548 NORAD NVG0523 EST

Distribution:

Mr. Graves

CJ



43a

FOOD RESEARCH INSTITUTE  
STANFORD UNIVERSITY  
STANFORD, CALIFORNIA 94305

Telephone: (415) 321-2300

Cable: FOODRES STANFORD

October 29, 1973

*Replied  
11/5/73*

Dr. Montague Yudelman, Director  
Department of Agriculture and  
Rural Development  
International Bank for Reconstruction  
and Development  
1818 H Street, N. W.  
Washington, D. C. 20433

Dear Monty:

I am prompted to write this note because I want to send you a copy of the enclosed letter to Hugh Bunting. You will see that I am still trying to promote the idea of including an R&D activity related to equipment suitable for small farming as part of the research program at ICRISAT. I gather that Rubens Vaz da Costa is the only economist on the ICRISAT Board of Trustees, but I suspect that in your new job as Director of the Department of Agriculture and Rural Development at the Bank you may have an opportunity to put in a word on this. As you know, in the past I have had other ideas as to how this might be accomplished, but currently at least I am inclined to think that ICRISAT is the most logical locale for such an activity.

I also want to congratulate you on the new position. Needless to say, I am very happy that the Bank now has a Department of Agriculture and Rural Development, that it is headed by an economist, and that the economist is Monty Yudelman.

Cordially,

*Bruce*

Bruce F. Johnston

BFJ/mj

Enclosure

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1973 NOV -1 PM 2:44

COMMUNICATIONS  
SECTION

TO: [Illegible]

FROM: [Illegible]

DATE: [Illegible]

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BY: [Illegible]

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STANFORD UNIVERSITY  
FOOD RESEARCH INSTITUTE

[Handwritten mark]



G39

FOOD RESEARCH INSTITUTE  
STANFORD UNIVERSITY  
STANFORD, CALIFORNIA 94305

Telephone: 321-2300

Cable: FOODRES STANFORD

October 26, 1973

Professor A. H. Bunting  
Plant Science Laboratories  
University of Reading  
Whiteknights  
Reading, Berkshire, England

Dear Hugh:

This is mainly a follow-up to our conversation at Sussex concerning the desirability of including R&D activities related to improved farm equipment adapted to the needs of small farmers whose use of inputs is subject to a severe purchasing constraint. But I will mention in passing that I have written to Guy Hunter accepting the invitation to present a Plenary Lecture at your Second International Seminar on Change in Agriculture.

To save time, I am enclosing a copy of a letter that I sent a year ago to Ed Edwards at the Ford Foundation. The last paragraph of the letter to Edwards deals with a separate subject, the location of plants for the manufacture of nitrogen fertilizers, but with your catholic interests I think that you might find that item of some interest as well.

I hope that you will have a convenient opportunity to discuss this matter with Mr. Melville since he is a member of the ICRISAT Board of Trustees. It seems to me that several recent developments have reinforced the arguments for strengthening R&D activities aimed at increasing the availability to small farmers of simple, inexpensive equipment of good design. The most obvious consideration is of course the increased awareness of the seriousness of problems of under- and unemployment resulting from the "labor force explosion" and of the importance of pursuing agricultural strategies that have a broader impact on the rural population. Secondly, there is accumulating evidence that tractor mechanization is often socially unprofitable in late developing countries but that the spread of high-yielding varieties in many areas is creating labor bottlenecks and increased cash receipts that provide the basis for a sizable effective demand for improved farm equipment. (Incidentally, the Reading M.A. thesis on "The Economics of Farm Power in the Indus Plains of West Pakistan" by C. E. Finney, completed under the direction of Dr. Thornton, provides some very interesting information concerning the potential for significant private and social benefits from wider use of improved equipment.) Third, logical analysis and empirical evidence both support the proposition that local manufacture of simple items of farm equipment (bullock-drawn seed-fertilizer drills, three-tyned cultivators, disc or spike-tooth harrows, stationary threshers or simpler items such as the Olpad thresher, et al.) can provide a valuable stimulus to the expansion of manufacturing output



Professor A. H. Bunting

Page 2

October 26, 1973

and employment and to the strengthening and spread of competence in metalworking. (Peter Kilby and I examine the arguments and evidence on that proposition at some length in an article on "The Choice of Agricultural Strategy and the Development of Manufacturing," Food Research Institute Studies, Vol. XI, No. 2, 1973 and in our OECD Development Centre monograph Agricultural Strategies, Rural-Urban Interactions and the Expansion of Income Opportunities.) Fourth, Dr. Amir Khan and his associates in the Agricultural Engineering unit at IRRI seem to have evolved some effective techniques for carrying out this type of R&D, including considerable attention to the problems of promoting the critical step from production of a prototype to the launching of commercial manufacture. (The IRRI Annual Report for 1972 has some interesting information on this.) But the work at IRRI definitely does not meet the needs that could be served by a program at ICRISAT. In addition to the obvious fact that ICRISAT is a much more appropriate location for the development and testing of equipment for upland cultivation in savanna regions, the types of equipment that have been emphasized at IRRI are almost certainly too sophisticated and too costly to meet the needs of small farmers in much of India, Pakistan, and sub-Saharan Africa. Moreover, William Chancellor's study of traditional equipment in Thailand (and observations by others as well) seems to indicate that there is only limited scope for significantly improving the set of traditional animal-drawn implements used in Southeast Asia whereas there is clearly great scope for improving on the range of bullock-drawn equipment used by cultivators in the Indian subcontinent and tropical Africa.

It is true that a fair amount of work of this nature is in progress at scattered locations, and CEEMAT has done a good deal of work oriented to the Francophone countries of Africa. But the CEEMAT work seems to have been quite weak on the economic side, and I formed a distinct impression that the manufacturing plant that was set up in Senegal with some technical assistance from CEEMAT was too large and too capital-intensive to have the sort of beneficial effects in developing local competence in metalworking which I referred to earlier. My visit to the CADU project in Ethiopia last month was prompted in part by a desire to learn more about their R&D activities related to farm equipment. It seems to me that the experience there further emphasizes the need for an international center to make available prototypes and blueprints, to facilitate the exchange of information based on testing and experience under a variety of soil and climatic conditions, and to carry out research beyond the resources of a one- or two-man operation such as has existed at CADU.

I am not bothering to enclose the extracts from the OECD monograph that are mentioned in my letter to Edwards, but I will mention two points that are discussed in the monograph. First, there seems to be a good bit of evidence which suggests that a moldboard plow is not the optimal substitute for the traditional desi plow used in India and Pakistan or



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

October 19, 1973

TO: ICRISAT Donors  
FROM: Executive Secretary  
SUBJECT: Meeting of October 31

1. This will confirm that there will be an informal meeting of donors to ICRISAT, and of members of the Consultative Group having a special interest in ICRISAT, on October 31. The meeting will begin at 2:30 on the afternoon of October 31, in Room D-956 of the headquarters of the World Bank. This room can most conveniently be reached by entering the Bank through the entrance at 1809 G Street, N. W.

2. The purpose of the meeting is to discuss the prospects for meeting the financial requirements of ICRISAT during the period of the construction and initial equipment of its headquarters installation, between now and 1977 or 1978. It is hoped that the discussion will indicate a basis on which ICRISAT can sign multi-year contracts for construction, and will also provide a basis on which to determine whether it might be desirable for the World Bank Group to arrange a standby position with respect to ICRISAT's financial requirements to protect ICRISAT against interruptions which, for procedural reasons, might occur in the cash flow from donors to ICRISAT.

3. The financial requirements for ICRISAT, as so far projected, are shown below, in equivalents of millions of U.S. dollars:

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Core	1.2	2.6	3.6	4.2	4.2
Capital	<u>1.8</u>	<u>3.0</u>	<u>6.0</u>	<u>2.0</u>	<u>0.5</u>
	3.0	5.6	9.6	6.2	4.7

It is expected that actual contributions to ICRISAT for 1973 will be approximately \$3.46 million. Present indications are that contributions to ICRISAT for 1974 will be \$5.9 million. Members may recall from International Centers Week that ICRISAT's projections of its capital requirements do not include provision for a working capital fund.

4. The requirements of ICRISAT's capital budget were shown in detail in tabulations which were circulated to donors and interested members of the Consultative Group on September 5, 1973. You are requested to bring these tabulations to the meeting.

INCOMING TELEX

93a LOG 65

Oct 17 3 20 PM 1973

COMMUNICATIONS  
SECTION

Distribution: Mr. Graves

FROM NEW YORK VIA UN

IB50 NY 18 16 1615Z ;

INTBAFRAD

WASHDC ;

MISC184 GRAVES THANKS YOUR TELEGRAM CONCERNING ICRISAT DONORS MEETING  
WHICH EYE WILL PLAN TO ATTEND. REGARDS ;

MASHLER "

COL 184 "



43a

Mr. Yudelman

October 16, 1973

Harold Graves *HW*

ICRISAT Meeting, October 31

Invitations have been issued for members of the Consultative Group who are donors to, or have special interests in, ICRISAT, to meet in the Bank a day ahead of the Consultative Group meeting at 2:30 pm on November 1. The meeting, in effect, re-activates the old ICRISAT Subcommittee of the Consultative Group, of which Mr. Demuth was Chairman; and Mr. Demuth intends to chair the meeting of October 31. The Bank, of course, is entitled to additional representation at this meeting.

The purpose of the meeting will be to find out what financing ICRISAT can reasonably expect from donors during the remainder of the period of its capital program for the construction and initial equipment of its headquarters station in Hyderabad, India. If the results of the meeting are reasonably re-assuring, two lines of action will follow: (a) ICRISAT will proceed toward the signature next spring of multi-year commitments with contractors for the construction of its buildings and toward the placing of advance orders for the delivery of major items of equipment; and (b) a proposal will be made to IDA Executive Directors (in December 1973 or January 1974) that IDA enter into a standby arrangement with respect to ICRISAT financing during this period.

The background is as follows:

The execution of ICRISAT's capital program obviously will extend over a period of several years; but most donors are able to give firm assurances of support for only one year. Even after donor offices have decided what they are going to recommend to cabinet ministers and parliaments, there may be interruptions in cash flow to ICRISAT, arising from delays in parliamentary authorizations or appropriations or from other procedural difficulties. Nevertheless, in the face of these uncertainties, the Institute must be able to sign long-term contracts for construction and to plan the acquisition of equipment on an orderly schedule.

In discussion with the principal ICRISAT donors and with Ralph Cummings, the Director General of ICRISAT, the Consultative Group Secretariat has floated the idea that it might be useful for donors to sit down together and see what their intentions and capabilities are with respect to ICRISAT between now and 1978. From this, some idea will emerge whether ICRISAT can reasonably expect to carry through its construction and equipment program as now planned, or whether some modifications in timing and content may be required.



October 16, 1973

There will also remain the problem of cash flow. To deal with this matter, Mr. Demuth presented to Mr. McNamara last summer, and Mr. McNamara tentatively approved, a proposal that IDA, in certain circumstances, be prepared to enter into a standby arrangement whereby the Association would make funds available to cover shortages caused by the inability of donors to fulfill their intentions with respect to the Institute. In fact, IDA would open a line of credit to ICRISAT in the amount of the funds needed (estimated to be around \$12 million beginning in 1974), from which ICRISAT would draw if and to the extent that expected funds failed to appear.

Mr. McNamara's two conditions for presenting a proposal along these lines to the Executive Directors were, first, that the principal Executive Directors from Part I countries should be willing to entertain such a proposal and, second, that a feasible financial plan, indicating the intention of donors (perhaps including IDA itself) to provide the necessary funds, should exist. The Secretariat already is touching base with Executive Directors, and the meeting in Washington may give us the basis on which to draw up a financial plan. The Board presentation, if it occurs, probably would be made in December 1973 or January 1974.

cc: Mr. Baum

HGraves :apm



93a

**OUTGOING WIRE**

TO: MR. ARNOLD WILLEN  
DEPARTMENT OF DEVELOPMENT COOPERATION  
ROYAL MINISTRY FOR FOREIGN AFFAIRS  
STOCKHOLM  
SWEDEN

DATE: OCTOBER 15, 1973

CLASS OF  
SERVICE: **TELEX**

WH

COUNTRY:

TEXT:  
Cable No.:

NOW DEFINITELY PLANNING TO HAVE MEETING OF ICRISAT DONORS JUST BEFORE CONSULTATIVE GROUP. WOULD CONVENE AT WORLD BANK HALF PAST TWO OCTOBER THIRTY ONE AND LAST PERHAPS TWO HOURS. SUBJECT WOULD BE PROSPECTS FOR FINANCING ICRISAT CONSTRUCTION AND EQUIPMENT PLAN WHICH EXPECTED TO BE COMPLETED IN 1977 OR 1978. PURPOSE WOULD BE FIRST TO GIVE ICRISAT SOME IDEA OF BASIS ON WHICH IT CAN ENTER INTO CONTRACTS FOR CONSTRUCTION AND EQUIPMENT AND SECOND TO GIVE THE BANK SOME IDEA OF BASIS ON WHICH IT MIGHT UNDERTAKE TO PROVIDE TEMPORARY AND REIMBURSABLE FINANCING OF DEFICITS CAUSED BY INTERRUPTIONS TO CASH FLOW FROM OTHER DONORS. REGULAR NOTICE OF MEETING WILL BE DISTRIBUTED SHORTLY BUT IN MEANTIME HOPE YOU WILL PLAN TO ATTEND OR BE REPRESENTED. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME **Harold N. Graves, Jr.**

DEPT. **International Relations**

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

**HGraves :apm**

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DEPT: INTERNATIONAL RELATIONS

NAME: HAZEL H. STUBBS, JR. Oct 15 5 47 PM 1973

AUTHORIZED BY: COMMUNICATIONS SECTION

CC: MR. KASLOFF

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STUBBS

WILLIAM OR BE REPRESENTED RECEIVED

MIGHT BE DISSEMINATED THROUGH THE IN UNWILLING MOUTH FOR MIGHT BE TO

IMPLICATIONS TO GIVE FROM FROM OTHER DOMESTIC RECEIVE NOTICE OF MEETING

TO PROBABLY DETERMINE AND REIMBURSEMENT FINANCING OF DEFICITS COVERED BY

SECOND TO STATE THE BANK SOME IDEAS OF BASIS ON WHICH IT MIGHT UNDERSTAND

ON WHICH IT CAN ENTER INTO CONTRACTS FOR CONSTRUCTION AND EQUIPMENT AND

TALK OR TALK. PURPOSE WOULD BE FIRST TO STATE IDENTIFY SOME IDEAS OF BASIS

IDENTIFY CONSTRUCTION AND EQUIPMENT FROM WHICH EXPECTED TO BE COMPLETED IN

ONE AND TALK BEHAVIOR TWO HOUSES. SUBJECT WOULD BE SUBJECTS FOR FINANCING

CONSTRUCTIONAL GROUP. WOULD CONSIDER WE WOULD BANK HAVE BASE TWO OBTAIN TRIPLE

NOT DETERMINE FINANCING TO HAVE MEETING OF IDENTIFY DOMESTIC TALK BEFORE

Copy No: 1

TEXT: 1

COPY: 1

SWEDEN  
 STOCKHOLM  
 BANK OF SWEDEN FOR FOREIGN BANKING  
 INTERNATIONAL OF FINANCIAL COMMUNICATION  
 MR. ANDREW MITCHELL

SERVICE: TELETYPE  
 CLASS OF

DATE: OCTOBER 12, 1973

*[Handwritten initials]*

OUTGOING MESSAGE

ASSOCIATION INTERNATIONAL DELEGATION	RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL BANK FOR	COOPERATION INTERNATIONAL FINANCE
---	--	--------------------------------------

FORM NO. 22

*[Handwritten number]*



93a

**OUTGOING WIRE**

TO: BOOK OF FOUR AS FOLLOWS: DATE: OCTOBER 15, 1973

✓ MR. IAN ROBERTSON  
CIDA *WU Telex WUI*  
OTTAWA  
CANADA

CLASS OF *WU*  
SERVICE: TELEX

COUNTRY: ✓ MR. J. H. HULSE  
TEXT: IDRC *WU Telex WUI*  
Cable No.: OTTAWA  
CANADA

✓ MR. A. R. MELVILLE  
MINISTRANT *Tel + ITT*  
LONDON  
ENGLAND

✓ MR. WILLIAM T. MASHLER  
UNDP *WU Telex WUI*  
NEW YORK

(SEE TEXT ATTACHED)

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AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. International Relations

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves ; apm

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**OUTGOING WIRE**

TO:

DATE: OCTOBER 15, 1973

CLASS OF  
SERVICE: TELEX

COUNTRY:

BOOK OF FOUR

TEXT:

Cable No.:

NOW DEFINITELY PLANNING TO HAVE MEETING OF ICRISAT DONORS JUST BEFORE CONSULTATIVE GROUP. WOULD CONVENE AT WORLD BANK HALF PAST TWO OCTOBER THIRTY ONE AND LAST PERHAPS TWO HOURS. SUBJECT WOULD BE PROSPECTS FOR FINANCING ICRISAT CONSTRUCTION AND EQUIPMENT PLAN WHICH EXPECTED TO BE COMPLETED IN 1977 OR 1978. PURPOSE WOULD BE FIRST TO GIVE ICRISAT SOME IDEA OF BASIS ON WHICH IT CAN ENTER INTO CONTRACTS FOR CONSTRUCTION AND EQUIPMENT AND SECOND TO GIVE THE BANK SOME IDEA OF BASIS ON WHICH IT MIGHT UNDERTAKE TO PROVIDE TEMPORARY AND REIMBURSABLE FINANCING OF DEFICITS CAUSED BY INTERRUPTIONS TO CASH FLOW FROM OTHER DONORS. REGULAR NOTICE OF MEETING WILL BE DISTRIBUTED SHORTLY BUT IN MEANTIME HOPE YOU WILL PLAN TO ATTEND OR BE REPRESENTED. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME **Harold N. Graves, Jr.**

DEPT. **International Relations**

SIGNATURE \_\_\_\_\_  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: **HGraves : apm**

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DEPT

INTERNATIONAL RELATIONS

NAME

John M. Stevens, Jr.

APPROVED BY

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SECRET

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WILL BE DISTRIBUTED EXCEPT FOR INFORMATION MORE FOR WILL BE TO

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ON WHICH IT CAN ENTER INTO CONTRACTS FOR CONSTRUCTION AND EQUIPMENT AND

1971 OR 1972. PURPOSE WOULD BE FIRST TO GIVE INDIVIDUAL SOME IDEAS ON BASIS

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ONE AND LAST PHASE TWO WORKS. SUBJECT WOULD BE PROPOSALS FOR FINANCING

CONSTRUCTION WORK. WOULD COME VI WOULD BANK HAVE FIRST TWO OCTOBER 1971

FROM DEFINITELY FINANCING TO HAVE MEETING OF INDIVIDUAL DOMESTIC 1971 BEFORE

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TEXT

COPYING

BOOK OF WORK

SERVICE  
CLASS OF

TELEX

TO:

DATE

OCTOBER 12 1973

OUTGOING WIRE

ASSOCIATION INTERNATIONAL DEVELOPMENT (3-10) Form No 33	RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL BANK FOR	CORPORATION INTERNATIONAL FINANCE
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53a

**OUTGOING WIRE**

TO: DR. WERNER TREITZ  
MINISTRY OF ECONOMIC COOPERATION  
FRIEDRICH EBERSTRASSE 114  
BONN

DATE: OCTOBER 10, 1973

CLASS OF  
SERVICE: TELEX

ITT

COUNTRY: GERMANY

TEXT:  
Cable No.:

PLANNING MEETING OF ICRISAT DONORS JUST BEFORE CONSULTATIVE GROUP.  
WOULD CONVENE AT WORLD BANK HALF PAST TWO OCTOBER THIRTY ONE AND LAST  
PERHAPS TWO HOURS. SUBJECT WOULD BE PROSPECTS FOR FINANCING ICRISAT  
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TO CASH FLOW FROM OTHER DONORS. REGULAR NOTICE OF MEETING WILL BE  
DISTRIBUTED SHORTLY BUT IN MEANTIME HOPE YOU WILL PLAN TO ATTEND. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. International Relations

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

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cc: Dr. Janssen

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INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO:

DR. WERNER TREITS  
MINISTRY OF ECONOMIC COOPERATION  
FRIEDRICH STRASSE 11A  
BONN

DATE: OCTOBER 10, 1973

CLASS OF  
SERVICE: TELEX

TTT

COUNTRY:

GERMANY

TEXT:

Cable No.:

PLANNING MEETING OF ICRISAT DONORS JUST BEFORE CONSULTATIVE GROUP.  
WOULD CONVEGE AT WORLD BANK HALF PAST TWO OCTOBER THIRTY ONE AND LAST  
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GRAVES

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AUTHORIZED BY:

NAME

Harold N. Graves, Jr.

DEPT.

International Relations

SIGNATURE

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Graves: qpm

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cc: Dr. Janssen

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Handwritten initials

93a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD  
HYDERABAD

DATE: OCTOBER 10, 1973

CLASS OF  
SERVICE: LT

COUNTRY: INDIA

TEXT:  
Cable No.: NOW DEFINITELY PLANNING MEETING OF ICRISAT DONORS HALF PAST TWO  
AFTERNOON OCTOBER THIRTY ONE TO DISCUSS ICRISAT CAPITAL FUNDING. HOPE  
YOU CAN ATTEND AND GIVE TWENTY MINUTE DESCRIPTION OF CAPITAL NEEDS  
FLESHING OUT TABLES YOU GAVE ME AT CENTERS WEEK. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr,

DEPT. International Relations

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: HGraves : apm

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INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

OUTGOING WIRE

TO: CUMINGS  
CRISAT  
SECUNDERABAD  
HYDRABAD

DATE: OCTOBER 10, 1973

CLASS OF SERVICE: JT

COUNTRY: INDIA

TEXT: Cable No.:

NOW DEFINITELY PLANNING MEETING OF ICRIAT DONORS HALF PAST TWO  
AFTERNOON OCTOBER THIRTY ONE TO DISCUSS ICRIAT CAPITAL FUNDING. HOPE  
YOU CAN ATTEND AND GIVE TWENTY MINUTE DESCRIPTION OF CAPITAL NEEDS  
FLASHING OUT TABLES YOU GAVE ME AT CENTERS WEEK. REGARDS.

GRAVES

*Handwritten signature/initials*

NOT TO BE TRANSMITTED

AUTHORIZED BY:

Harold N. Graves, Jr.

NAME

International Relations

DEPT

SECTION COMMUNICATIONS  
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53a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD  
HYDERABAD

DATE: SEPTEMBER 28, 1973

CLASS OF  
SERVICE: LT

*Rc*

COUNTRY: INDIA

TEXT:  
Cable No.:

MEETING ON ICRISAT CAPITAL FUND NOT YET AGREED OR FIXED BUT WOULD BE  
HELPFUL IF YOU COULD TENTATIVELY PLAN TO BE IN WASHINGTON AFTERNOON  
OCTOBER 31 FOR THAT PURPOSE. REGARDS.

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME **Harold N. Graves, Jr.**

DEPT. **International Relations**

SIGNATURE *Harold N. Graves, Jr.*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: **HGraves : apm**

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INTERNATIONAL FINANCE  
CORPORATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

OUTGOING WIRE

DATE SEPTEMBER 28, 1973

CLASS OF  
SERVICE: LT

TO:  
CUMMINGS  
CRISAT  
SECUNDERABAD  
HYDERABAD

COUNTRY: INDIA

TEXT:  
Cable No.:

MEETING ON CRISAT CAPITAL FUND NOT YET AGREED OR FIXED BUT WOULD BE  
HELPFUL IF YOU COULD TENTATIVELY PLAN TO BE IN WASHINGTON AFTERNOON  
OCTOBER 31 FOR THAT PURPOSE. REGARDS.

GRAVES

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AUTHORIZED BY:

Harold N. Graves, Jr.

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International Relations

DEPT.

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SIGNATURE

HGraves:sgm

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Distribution: Mr. Cheek ✓

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URWT HL INBX 015

SECUNDERABAD 15 10 1110

September 10, 1973

LT

INTBAFRAD

WASHINGTON DC

ATTENTION CHEEK CORRECTED TEXT ALREADY MAILED SEPTEMBER SEVENTH  
CUMMINGS CRISAT SECUNDERABAD

COL LT



CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

93a

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

September 5, 1973

TO: ICRISAT Donors  
FROM: Executive Secretariat  
SUBJECT: Capital Budget of ICRISAT

1. At the request of the Secretariat, Dr. Ralph Cummings, the Director of ICRISAT, has provided tabular information concerning the capital budget of his Institute over the span 1972-1977.

2. As both Dr. Cummings and the CG review team which visited ICRISAT have observed, it is possible that, because of price rises, these estimates may be exceeded by actual costs. Nevertheless, it is thought that the information will be of interest to the Group members particularly interested in ICRISAT, and it is attached.

Attachment  
HG:mcj

June 9, 1973

S U M M A R Y

ICRISAT CAPITAL BUDGET PROJECTIONS - 1972-1977

Budget Code	Item	Total Estimated Cost 1972-1977	ESTIMATES													
			Actual 1972		1973		1974		1975		1976		1977		TOTAL	
			Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
100-00-00	A. Site Development	495,000	104,732	-	184,400	10,000	100,000	-	70,868	-	15,000	-	10,000	-	485,000	10,000
110-00-00	B. Campus External Work	1,506,000	-	-	96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000	-	1,259,000	247,000
120-00-00	C. Building Construction	6,403,000	-	-	101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,900	87,100	150,000	5,000	5,386,200	1,016,800
130-00-00	D. Equipment	3,299,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,872
140-00-00	E. Others	701,000	-	-	174,850*	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500
150-00-00	F. Contingencies	1,000,000	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	150,000
	<b>TOTAL:</b>	<b>13,404,000</b>	<b>157,543</b>	<b>-</b>	<b>834,250</b>	<b>965,750</b>	<b>2,033,200</b>	<b>966,800</b>	<b>4,352,735</b>	<b>1,647,265</b>	<b>1,796,600</b>	<b>203,400</b>	<b>340,500</b>	<b>105,957</b>	<b>9,514,828</b>	<b>3,889,172</b>



ICRISAT BUDGET ESTIMATES - 1973-1977

Budget Code	Description	Budgeted	Actual 1972		1973		1974		1975		1976		1977		Total	
		Total Cost 1972-1977	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
100-00-00A.	<u>SITE DEVELOPMENT</u>															
100-01-00	1. Temporary structures	40,000	14,427		11,200		4,000		5,373		2,000		3,000		40,000	
100-02-00	2. Fences	31,000	25,464		2,300		1,000		1,236		-		1,000		31,000	
100-03-00	3. Roads unpaved and culverts	15,000	7,297		7,500		-		203		-		-		15,000	
100-04-00	4. Drainage	11,000	2,927		7,500		-		573		-		-		11,000	
100-05-00	5. Land Shaping	128,000	29,462		22,600		50,000		25,938		-		-		128,000	
100-06-00	6. Irrigation systems	81,000	16,453		31,900		18,000		6,647		8,000		-		81,000	
100-07-00	7. Irrigation equipment	34,000	8,237		14,800	10,000	-		963		-		-		24,000	10,000
100-08-00	8. Tank reclamation	80,000	-		37,600		12,000		25,400		5,000		-		80,000	
100-09-00	9. Relocation of Elec. power lines and Telephone lines	50,000	-		37,000		13,000		-		-		-		50,000	
100-10-00	10. Land Survey	25,000	465		12,000		2,000		4,535		-		6,000		25,000	
	Sub-Total:	495,000	104,732		184,400	10,000	100,000		70,868		15,000		10,000		485,000	10,000
110-00-00 B.	<u>CAMPUS EXTERNAL WORK</u>															
110-01-00	1. Earth movement	90,000			30,000		50,000		-		10,000		-		90,000	
110-02-00	2. Utilities & Services (Primary connections plus distribution)															
110-02-01	a) Water (Storage, Treatment Equipment)	196,000			34,000		35,000	15,000	67,000		45,000		-		181,000	15,000
110-02-02	b) Sewerage (including STP)	180,000			-		30,000		100,000		30,000		20,000		180,000	
110-02-03	c) Elec. including sub-stations and generators	350,000			23,000		50,000	30,000	85,000	77,000	85,000		-		243,000	107,000
110-02-04	d) Telephone and Radio	100,000			9,000	10,000	-		10,000	40,000	10,000	15,000	6,000		35,000	65,000
110-02-05	e) Gas bulk service	60,000			-		-		20,000	10,000	25,000		5,000		50,000	10,000
110-03-00	3. Road paved	390,000			-		90,000		180,000		70,000		50,000		390,000	
110-04-00	4. Contingencies	140,000			-		30,000	10,000	30,000	10,000	30,000	30,000	-		90,000	50,000
	Sub-Total:	1,506,000			96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000		1,259,000	247,000

(Cont'd)

(2)

ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
120-00-00	<u>C. BUILDING CONSTRUCTION:</u>															
120-01-00	1. Administration:															
120-01-01	a) General	233,000					45,000	15,000	100,000	13,000	50,000	10,000	-	-	195,000	38,000
120-01-02	b) Library	93,000					20,000	5,000	35,000	8,000	22,000	3,000			77,000	16,000
120-01-03	c) Auditorium	82,000					17,000	3,000	35,000	7,000	17,000	3,000			69,000	13,000
120-01-04	d) Amphitheater															
120-02-00	2. Laboratory - Research	571,000					95,000	25,000	281,000	50,000	100,000	20,000			476,000	95,000
120-02-01	a) Laboratory - West - I															
120-02-02	b) " " - II															
120-02-03	c) Laboratory Benches(\$10-sq.ft.)	250,000					-	-	-	250,000	-	-			-	250,000
120-03-00	3. Laboratory - (Field Research)	545,000					95,000	25,000	265,000	40,000	100,000	20,000			460,000	85,000
120-03-01	a) Laboratory - West - III															
120-03-02	b) Crop Work Area															
120-03-03	c) Plant Quarantine															
120-04-00	4. Farm Service Unit/Physical Plant Services:															
120-04-01	a) General	478,000		85,000	-	125,000	25,000	223,000	20,000	-	-				433,000	45,000
120-04-02	b) Machinery Sheds															
120-04-03	c) Utility Services															
120-05-00	5. Dining Centre	219,000					40,000	10,000	100,000	19,000	44,000	6,000			184,000	35,000
120-06-00	6. Plant Growth Facility:															
120-06-01	a) Head House	153,000					30,000	10,000	60,000	13,000	35,000	5,000			125,000	28,000
120-06-02	b) Glass/Plastic Houses (4)	100,000					5,000	95,000	-	-	-	-			5,000	95,000
120-06-03	c) Screen Houses (4)	80,000		1,000	19,000	3,000	57,000	-	-	-	-	-			4,000	76,000
120-07-00	7. Warehouse	48,000					19,000	5,000	19,000	5,000	-	-			38,000	10,000
120-07-01	a) General															
120-07-02	b) Volatile Chemical Stores															
120-07-03	c) Chemical/Fertilizer Store															

(Cont'd)



(3)

## ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted	Actual 1972		1973		1974		1975		1976		1977		Total	
		Total Cost 1972-1977	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>C. Building Construction (Cont'd):</b>																
120-08-00	8. Commissary Store	13,000					5,000	1,000	5,000	2,000	-	-			10,000	3,000
120-09-00	9. Canteen	59,000					20,000	9,000	25,000	5,000	-	-			45,000	14,000
120-10-00	10. Laundry	15,000					4,000	1,000	4,000	1,000	4,000	1,000			12,000	3,000
120-11-00	11. Gate House	4,000					-	-	1,800	2,000	1,900	100			3,700	300
120-12-00	12. Sprayer Wash Unit	4,000					-	-	3,500	500	-	-			3,500	500
120-13-00	13. Covered Parking Space(s)	60,000					-	-	38,000	2,000	19,000	1,000			57,000	3,000
120-14-00	14. Recreational facilities (Prof. & Employee Staff)	82,000			15,000	-	20,000	10,000	30,000	7,000	-	-			65,000	17,000
120-14-01	a) Swimming Pools (2)															
120-14-02	b) Tennis Courts (4)															
120-14-03	c) Playing field(s)															
120-15-00	15. Incinerator	2,000					-	-	-	-	2,000	-			2,000	-
120-16-00	16. Housing:															
120-16-01	a) Dormitories	796,000					180,000	20,000	370,000	26,000	145,000	5,000	48,000	2,000	743,000	53,000
120-16-02	1) Flatlets															
120-16-03	b) Residences, Separate	1,411,000					300,000	31,000	650,000	61,000	290,000	10,000	66,000	3,000	1,306,000	105,000
120-16-04	1) Director's Residence (1)															
120-16-05	2) International Staff (20)															
120-16-06	3) Essential Support Staff (45)															
120-16-07	c) Apartment	110,000					25,000	5,000	44,000	6,000	28,000	2,000	-	-	97,000	13,000
120-16-08	d) Guest House/Club	82,000					15,000	5,000	35,000	7,000	19,000	1,000	-	-	69,000	13,000
120-16-09	e) Other Support Staff (44)	133,000					27,000	3,000	70,000	3,000	30,000	-	-	-	127,000	6,000
120-17-00	17. Common areas (30% of total occupied less housing area)	780,000					200,000	-	374,000	-	170,000	-	36,000	-	780,000	-
Sub-Total:		6,403,000			101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,000	87,100	150,000	5,000	5,386,200	1,016,800

(Cont'd)

## ICRISAT Budget Estimates 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
130-00-00	D. EQUIPMENT:															
130-01-00	1. Scientific Equipment (Lab.)	1,192,200	63	-	30,000	270,000	30,000	345,000	50,000	387,137	2,000	13,000	5,000	60,000	117,063	1,075,137
130-02-00	2. Furniture:															
130-02-01	a) Household (Incl. Lamps and Drapes)	125,000	12,126	-	-	-	-	-	75,000	27,874	8,000	2,000	-	-	95,126	29,874
130-02-02	b) Dormitory	95,000	-	-	-	-	-	-	80,000	10,000	4,000	1,000	-	-	84,000	11,000
130-02-03	c) Guest House	9,000	273	-	-	-	-	-	5,000	1,727	1,500	500	-	-	6,773	2,227
130-02-04	d) Office	350,000	2,898	-	45,000	15,000	-	-	200,000	62,102	15,000	5,000	3,000	2,000	265,898	84,102
130-02-05	e) Library	25,000	-	-	-	-	-	-	5,000	18,000	1,000	1,000	-	-	6,000	19,000
130-02-06	f) Dining Centre	40,000	-	-	-	-	-	-	25,000	13,000	1,000	1,000	-	-	26,000	14,000
130-02-07	g) Auditorium	30,000	-	-	-	-	-	-	25,000	5,000	-	-	-	-	25,000	5,000
130-02-08	h) Class room	10,000	-	-	-	-	-	-	10,000	-	-	-	-	-	10,000	-
130-03-00	3. Materials Base Stock	100,000	-	-	15,000	15,000	5,000	5,000	20,000	25,000	5,000	5,000	2,500	2,500	47,500	52,500
130-04-00	4. Tractor & Field Equipment	415,000	9,412	-	45,000	300,000	5,000	15,000	15,000	25,588	-	-	-	-	74,412	340,588
130-05-00	5. Vehicles (Autos, Pickups, Lorries and Busses)	450,000	15,988	-	20,000	145,000	5,000	75,000	15,000	166,961	-	-	-	7,051	55,988	394,012
130-06-00	6. Communication & Information (Printing, Photo & Audiovisual Equip)	65,000	-	-	2,000	13,000	5,000	15,000	10,000	20,000	-	-	-	-	17,000	48,000
130-07-00	7. Shop Equipment	60,000	2,902	-	23,000	12,000	7,000	3,000	8,000	4,098	-	-	-	-	40,902	19,098
130-08-00	8. Tools Base Stock	40,000	44	-	4,000	18,000	1,000	5,000	1,000	5,956	1,000	2,000	1,000	1,000	8,044	31,956
130-09-00	9. Office Equipment	50,000	1,083	-	3,000	8,000	3,000	7,000	1,917	24,000	1,000	1,000	-	-	10,000	40,000
130-10-00	10. Computer Electronic	50,000	-	-	-	-	-	-	-	50,000	-	-	-	-	-	50,000
130-11-00	11. Photocopy Machine	10,000	-	-	-	3,000	-	-	-	4,000	-	3,000	-	-	-	10,000
130-12-00	12. Grounds & Janitorial Equipment	25,000	154	-	-	-	-	-	7,000	9,846	1,000	2,000	2,000	3,000	10,154	14,846
130-13-00	13. Electronic Test Equipment	20,000	-	-	-	6,000	-	2,000	-	5,000	-	4,000	-	3,000	-	20,000
130-14-00	14. Plot Equipment	25,000	1,678	-	1,000	6,500	200	800	3,000	5,822	200	800	1,000	4,000	7,078	17,922
130-15-00	15. Desk Calculators	35,000	-	-	-	8,300	-	10,000	-	11,700	-	5,000	-	-	-	35,000
130-16-00	16. Dining, Kitchen Equipment (including Airconditioners)	50,000	6,190	-	-	28,000	-	-	-	15,810	-	-	-	-	6,190	43,810
130-17-00	17. Laundry	20,000	-	-	-	6,000	-	14,000	-	-	-	-	-	-	-	20,000
130-18-00	18. Books and Publications	7,800	-	-	-	3,800	-	4,000	-	-	-	-	-	-	-	7,800
	Sub-Total,	3,299,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,672



## ICRISAT Budget Estimates 1973-1977 (Cont'd):

(5)

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
140-00- E.	<u>OTHERS:</u>															
00																
140-01-00	1. Architects' fees	611,000	-	-	172,000	20,000	145,000	5,000	155,000	-	114,000	-	-	-	586,000	25,000
140-02-00	2. Consultants' fees	50,000	-	-	2,500	20,000	2,000	13,000	2,000	10,500	-	-	-	-	6,500	43,500
140-03-00	3. Interior Decorator	20,000	-	-	-	-	-	-	5,000	2,000	5,000	2,000	5,000	1,000	15,000	5,000
140-04-00	4. Landscaping	20,000	-	-	350	-	10,000	5,000	3,650	1,000	-	-	-	-	14,000	6,000
	Sub-Total:	701,000	-	-	174,850	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500
150-00- F.	<u>CONTINGENCIES:</u>	1,000,000	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	150,000
00																

\* Includes Architectural Fees for 1972

53a

**OUTGOING WIRE**

TO: CUMMINGS  
CRISAT  
SECUNDERABAD

DATE: SEPTEMBER 5, 1973

CLASS OF  
SERVICE: LT / RCA

COUNTRY: INDIA

TEXT:  
Cable No.:

HAD THOUGHT OF ICRISAT CAPITAL MEETING ON AFTERNOON OCTOBER  
THIRTY ONE JUST BEFORE CONSULTATIVE GROUP MEETING BEGINNING  
NOVEMBER ONE. YOUR PARTICIPATION WOULD BE WELCOME AND HELPFUL.  
WE ARE CONSULTING MAJOR DONORS SEPTEMBER THIRTEEN ON A NUMBER  
OF MATTERS INCLUDING POSSIBLE ICRISAT MEETING AND MAY BE ABLE  
TO ADVISE MORE EXACTLY THEN. REGARDS

GRAVES

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Harold N. Graves, Jr.

DEPT. International Relations

SIGNATURE Harold N. Graves, Jr.  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE:

CLEARANCES AND COPY DISTRIBUTION:

HG:mcj

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Checked for Dispatch: Q





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SECUNDERBAD 46 3 1900

Distribution:

September 3, 1973

Mr. Graves

LT

INTBAFRAD

WASHINGTON DC

ATTENTION HAROLD GRAVES ADVISE DATE MEETING CONCERNING ICRISAT  
APITAL BUDGET STOP PLAN PARTICIPATION ILCA MEETING LONDON  
OCTOBER TWENTYSIX TO TWENTYEIGHT AND VISITS SWEDEN AND GERMANY  
FOLLOWING STOP CAN EASILY INCLUDE TRIP WASHINGTON AND TIME THAT  
PERIOD IF DESIRABLE STOP ADVISE

CUMMINGS CRISAT SECUNDERABAD

COL LT



ICRISAT

## OFFICE MEMORANDUM

TO: CG Files

DATE: August 23, 1973

FROM: Harold Graves *HG*SUBJECT: IDRC Grant to ICRISAT

In a telephone conversation yesterday, Mr. Hulse of IDRC said that the IDRC had agreed on a 2-year grant to ICRISAT which would be applied to ICRISAT's capital program: it would be used to pay for equipment (but not construction) required in ICRISAT's legumes program.

HG:mcj

AIR MAIL  
REGISTERED

August 9, 1973

Dear Ralph:

With this letter, I am sending you the verbatim transcript of that part of the Consultative Group meeting in which donors stated their intentions about grants to the various international agricultural research centers for 1974. This will enable you to make your own calculation of the grants intended for ICRISAT by governmental donors. I take it, incidentally, that when the Canadian representative mentioned a grant of at least \$800,000 to ICRISAT in 1974, he was referring to the amount already appropriated in 1973 but not yet transferred to ICRISAT, and that an additional contribution, of equal or greater size, is in prospect for 1974. In addition, no doubt, you will want to make allowance for contributions to ICRISAT by the Ford and Rockefeller Foundations, although the Foundations, as you know, will be reserving their specific decisions on these contributions until later in 1973.

Although such an eventuality hardly seems likely, if prospective donor contributions appeared to fall short of ICRISAT's stated needs for 1974, the Bank's affiliate, the International Development Association (IDA), would be willing to consider the possibility of a grant to ICRISAT, within the limit of IDA's available funds and taking due account of the needs of other centers whose requirements might not have been fully met by other donors.

I hope that donors will have made up their minds sufficiently about their contributions to ICRISAT for you to have by next October 1 a good idea of what funds to expect for 1974. At the end of that month, as you will remember, I hope we can have a brief meeting of donors on the question of an ICRISAT capital fund.

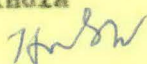
Sincerely,

Harold Graves

Enclosure

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

cc: Dr. Hardin  
Dr. Pino

  
HGraves:apm



*Yellow Copy*  
*Central Files*  
*G3a*

June 25, 1973

Mr. Constantin A. Stavropoulos  
The Legal Counsel  
United Nations  
N.Y., New York 10017

Dear Mr. Stavropoulos:

I am writing to you in response to your letter dated January 10, 1973 to Mr. McNamara concerning the proposed United Nations Juridical Yearbook for 1972. I must apologize for the delay in furnishing you with the enclosed material and trust that you will still be able to incorporate it in the Yearbook.

The material we have prepared would appear to relate to Chapter III. We have divided it into three parts. The first section covers developments relating to the International Center for the Settlement of Investment Disputes. The second section which covers the legal activities of the International Bank for Reconstruction and Development is devoted to a brief summary of the involvement of the Bank in the establishment of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). Attached to this latter section you will find the basic instruments relating to the establishment, funding and operation of ICRISAT. These are the following: the Memorandum of Understanding dated February 22, 1972 between the Bank and the Ford Foundation; the ICRISAT Special Account Agreement between the Bank and the Ford Foundation; the Memorandum of Agreement dated March 28, 1972 between the Government of India and the Ford Foundation, acting on behalf of ICRISAT; the Agreement dated July 5, 1972 between the Food and Agriculture Organization of the United Nations and the International Bank for Reconstruction and Development providing for the Constitution of ICRISAT; and the letter dated July 5, 1972 from the Government of India to FAO and the Bank confirming its agreement "to the establishment of ICRISAT as created under the Constitution". The third section provides a bibliography of publications during 1972 dealing with the Bank and also with ICSID.

I trust that the foregoing material is in keeping with your requirements. Please do not hesitate to let us know if we can be of further assistance.

Very truly yours,

Lester Nurick  
Associate General Counsel

Enclosures


93a

**OUTGOING WIRE**

TO: CUMMINGS  
CIRSAT  
SECUNDERABAD

DATE: June 22, 1973

CLASS OF  
SERVICE: LT



COUNTRY: INDIA

TEXT:  
Cable No.:

WOULD LIKE TO RECEIVE FINAL BUDGET AND TABLES AS SOON AS POSSIBLE  
FOR PURPOSES OF PREPARING CONSOLIDATED PICTURE STOP  
PLEASE ADVISE DATE IF WE WILL NOT HAVE THESE BY JULY 1 STOP  
REGARDS

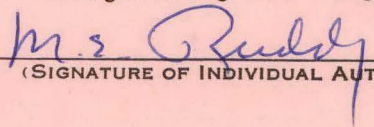
URQUHART

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Michael E. Ruddy

DEPT. Programming and Budgeting

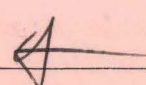
SIGNATURE   
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: CUMMINGS  
FIRST  
SECUNDERABAD  
COUNTRY: INDIA  
TEXT:  
Cable No.:

DATE: June 22, 1973  
CLASS OF SERVICE: LT

REGARDS  
PLEASE ADVISE DATE IF WE WILL NOT HAVE THESE BY JULY 1 STOP  
FOR PURPOSES OF PREPARING CONSOLIDATED PICTURE STOP  
WOULD LIKE TO RECEIVE FINAL BUDGET AND TABLES AS SOON AS POSSIBLE

URGENT

NOT TO BE TRANSMITTED

AUTHORIZED BY:  
NAME: Michael E. Ruddy  
DEPT: Programming and Budgeting  
SIGNATURE: *M. E. Ruddy*  
REFERENCE: *7 18 PM 1973*  
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Checked for Dispatch

93a

Mr. Robert Jones, Controller's

June 11, 1973

Harold Graves, IRD

ICRISAT Data for UNDP

You will remember that in the final accounting for the ICRISAT Special Account, a footnote was included to meet the special interests of the UNDP in the types of expenditure made from this account. Apparently, a copy of the final figures, with footnote, did not reach Mr. William Mashler of UNDP, who has a special interest in this matter. I would be much obliged if you would send him another copy.

*HG*  
HGraves:apm



June 9, 1973

S U M M A R YICRISAT CAPITAL BUDGET PROJECTIONS - 1972-1977

Budget Code	Item	Total Estimated Cost 1972-1977	ESTIMATES													
			Actual 1972		1973		1974		1975		1976		1977		TOTAL	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
100-00-00	A. Site Development	495,000	104,732	-	184,400	10,000	100,000	-	70,868	-	15,000	-	10,000	-	485,000	10,000
110-00-00	B. Campus External Work	1,506,000	-	-	96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000	-	1,259,000	247,000
120-00-00	C. Building Construction	6,403,000	-	-	101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,900	87,100	150,000	5,000	5,386,200	1,016,800
130-00-00	D. Equipment	3,299,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,872
140-00-00	E. Others	701,000	-	-	174,850*	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500
150-00-00	F. Contingencies	1,000,000	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	150,000
	TOTAL:	13,404,000	157,543	-	834,250	965,750	2,033,200	966,800	4,352,735	1,647,265	1,796,600	203,400	340,500	105,957	9,514,828	3,889,172

ICRISAT BUDGET ESTIMATES - 1973-1977

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
100-00-00A.	<u>SITE DEVELOPMENT</u>															
100-01-00	1. Temporary structures	40,000	14,427		11,200		4,000		5,373		2,000		3,000		40,000	
100-02-00	2. Fences	31,000	25,464		2,300		1,000		1,236		-		1,000		31,000	
100-03-00	3. Roads unpaved and culverts	15,000	7,297		7,500		-		203		-		-		15,000	
100-04-00	4. Drainage	11,000	2,927		7,500		-		573		-		-		11,000	
100-05-00	5. Land Shaping	128,000	29,462		22,600		50,000		25,938		-		-		128,000	
100-06-00	6. Irrigation systems	81,000	16,453		31,900		18,000		6,647		8,000		-		81,000	
100-07-00	7. Irrigation equipment	34,000	8,237		14,800	10,000	-		963		-		-		24,000	10,000
100-08-00	8. Tank reclamation	80,000	-		37,600		12,000		25,400		5,000		-		80,000	
100-09-00	9. Relocation of Elec. power lines and Telephone lines	50,000	-		37,000		13,000		-		-		-		50,000	
100-10-00	10. Land Survey	25,000	465		12,000		2,000		4,535		-		6,000		25,000	
	Sub-Total:	495,000	104,732		184,400	10,000	100,000		70,868		15,000		10,000		485,000	10,000
110-00-00 B.	<u>CAMPUS EXTERNAL WORK</u>															
110-01-00	1. Earth movement	90,000			30,000		50,000		-		10,000		-		90,000	
110-02-00	2. Utilities & Services (Primary connections plus distribution)															
110-02-01	a) Water (Storage, Treatment Equipment)	196,000			34,000		35,000	15,000	67,000		45,000		-		181,000	15,000
110-02-02	b) Sewerage (including STP)	180,000			-		30,000		100,000		30,000		20,000		180,000	
110-02-03	c) Elec. including sub-stations and generators	350,000			23,000		50,000	30,000	85,000	77,000	85,000		-		243,000	107,000
110-02-04	d) Telephone and Radio	100,000			9,000	10,000	-		10,000	40,000	10,000	15,000	6,000		35,000	65,000
110-02-05	e) Gas bulk service	60,000			-		-		20,000	10,000	25,000		5,000		50,000	10,000
110-03-00	3. Road paved	390,000			-		90,000		180,000		70,000		50,000		390,000	
110-04-00	4. Contingencies	140,000			-		30,000	10,000	30,000	10,000	30,000	30,000	-		90,000	50,000
	Sub-Total:	1,506,000			96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000		1,259,000	247,000

(Cont'd)



ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
120-00-00	<u>C. BUILDING CONSTRUCTION:</u>															
120-01-00	1. Administration:															
120-01-01	a) General	233,000					45,000	15,000	100,000	13,000	50,000	10,000	-	-	195,000	38,000
120-01-02	b) Library	93,000					20,000	5,000	35,000	8,000	22,000	3,000			77,000	16,000
120-01-03	c) Auditorium	82,000					17,000	3,000	35,000	7,000	17,000	3,000			69,000	13,000
120-01-04	d) Amphitheater															
120-02-00	2. Laboratory - Research	571,000					95,000	25,000	281,000	50,000	100,000	20,000			476,000	95,000
120-02-01	a) Laboratory - West - I															
120-02-02	b) " " - II															
120-02-03	c) Laboratory Benches(\$10-sq.ft.)	250,000					-	-	-	250,000	-	-			-	250,000
120-03-00	3. Laboratory - (Field Research)	545,000					95,000	25,000	265,000	40,000	100,000	20,000			460,000	85,000
120-03-01	a) Laboratory - West - III															
120-03-02	b) Crop Work Area															
120-03-03	c) Plant Quarantine															
120-04-00	4. Farm Service Unit/Physical Plant Services:															
120-04-01	a) General	478,000		85,000	-	125,000	25,000	223,000	20,000	-	-				433,000	45,000
120-04-02	b) Machinery Sheds															
120-04-03	c) Utility Services															
120-05-00	5. Dining Centre	219,000					40,000	10,000	100,000	19,000	44,000	6,000			184,000	35,000
120-06-00	6. Plant Growth Facility:															
120-06-01	a) Head House	153,000					30,000	10,000	60,000	13,000	35,000	5,000			125,000	28,000
120-06-02	b) Glass/Plastic Houses (4)	100,000					5,000	95,000	-	-	-	-			5,000	95,000
120-06-03	c) Screen Houses (4)	80,000		1,000	19,000	3,000	57,000	-	-	-	-			4,000	76,000	
120-07-00	7. Warehouse	48,000					19,000	5,000	19,000	5,000	-	-			38,000	10,000
120-07-01	a) General															
120-07-02	b) Volatile Chemical Stores															
120-07-03	c) Chemical/Fertilizer Store															



(3)

ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
<u>C. Building Construction (Cont'd):</u>																
120-08-00	8. Commissary Store	13,000					5,000	1,000	5,000	2,000	-	-			10,000	3,000
120-09-00	9. Canteen	59,000					20,000	9,000	25,000	5,000	-	-			45,000	14,000
120-10-00	10. Laundry	15,000					4,000	1,000	4,000	1,000	4,000	1,000			12,000	3,000
120-11-00	11. Gate House	4,000					-	-	1,800	2,000	1,900	100			3,700	300
120-12-00	12. Sprayer Wash Unit	4,000					-	-	3,500	500	-	-			3,500	500
120-13-00	13. Covered Parking Space(s)	60,000					-	-	38,000	2,000	19,000	1,000			57,000	3,000
120-14-00	14. Recreational facilities (Prof. & Employee Staff)	82,000			15,000	-	20,000	10,000	30,000	7,000	-	-			65,000	17,000
120-14-01	a) Swimming Pools (2)															
120-14-02	b) Tennis Courts (4)															
120-14-03	c) Playing field(s)															
120-15-00	15. Incinerator	2,000					-	-	-	-	2,000	-			2,000	-
120-16-00	16. Housing:															
120-16-01	a) Dormitories	796,000					180,000	20,000	370,000	26,000	145,000	5,000	48,000	2,000	743,000	53,000
120-16-02	1) Flatlets															
120-16-03	b) Residences, Seprate	1,411,000					300,000	31,000	650,000	61,000	290,000	10,000	66,000	3,000	1,306,000	105,000
120-16-04	1) Director's Residence (1)															
120-16-05	2) International Staff (20)															
120-16-06	3) Essential Support Staff (45)															
120-16-07	c) Apartment	110,000					25,000	5,000	44,000	6,000	28,000	2,000	-	-	97,000	13,000
120-16-08	d) Guest House/Club	82,000					15,000	5,000	35,000	7,000	19,000	1,000	-	-	69,000	13,000
120-16-09	e) Other Support Staff (44)	133,000					27,000	3,000	70,000	3,000	30,000	-	-	-	127,000	6,000
120-17-00	17. Common areas (30% of total occupied less housing area)	780,000					200,000	-	374,000	-	170,000	-	36,000	-	780,000	-
Sub-Total:		6,403,000			101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,900	87,100	150,000	5,000	5,386,200	1,016,800

(Cont'd)



ICRISAT Budget Estimates 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
130-00-00	D. EQUIPMENT:															
130-01-00	1. Scientific Equipment (Lab.)	1,192,200	63	-	30,000	270,000	30,000	345,000	50,000	387,137	2,000	13,000	5,000	60,000	117,063	1,075,137
130-02-00	2. Furniture:															
130-02-01	a) Household (Incl. Lamps and Drapes)	125,000	12,126	-	-	-	-	-	75,000	27,874	8,000	2,000	-	-	95,126	29,874
130-02-02	b) Dormitory	95,000	-	-	-	-	-	-	80,000	10,000	4,000	1,000	-	-	84,000	11,000
130-02-03	c) Guest House	9,000	273	-	-	-	-	-	5,000	1,727	1,500	500	-	-	6,773	2,227
130-02-04	d) Office	350,000	2,898	-	45,000	15,000	-	-	200,000	62,102	15,000	5,000	3,000	2,000	265,898	84,102
130-02-05	e) Library	25,000	-	-	-	-	-	-	5,000	18,000	1,000	1,000	-	-	6,000	19,000
130-02-06	f) Dining Centre	40,000	-	-	-	-	-	-	25,000	13,000	1,000	1,000	-	-	26,000	14,000
130-02-07	g) Auditorium	30,000	-	-	-	-	-	-	25,000	5,000	-	-	-	-	25,000	5,000
130-02-08	h) Class room	10,000	-	-	-	-	-	-	10,000	-	-	-	-	-	10,000	-
130-03-00	3. Materials Base Stock	100,000	-	-	15,000	15,000	5,000	5,000	20,000	25,000	5,000	5,000	2,500	2,500	47,500	52,500
130-04-00	4. Tractor & Field Equipment	415,000	9,412	-	45,000	300,000	5,000	15,000	15,000	25,588	-	-	-	-	74,412	340,588
130-05-00	5. Vehicles (Autos, Pickups, Lorries and Busses)	450,000	15,988	-	20,000	145,000	5,000	75,000	15,000	166,961	-	-	-	7,051	55,988	394,012
130-06-00	6. Communication & Information (Printing, Photo & Audiovisual Equip)	65,000	-	-	2,000	13,000	5,000	15,000	10,000	20,000	-	-	-	-	17,000	48,000
130-07-00	7. Shop Equipment	60,000	2,902	-	23,000	12,000	7,000	3,000	8,000	4,098	-	-	-	-	40,902	19,098
130-08-00	8. Tools Base Stock	40,000	44	-	4,000	18,000	1,000	5,000	1,000	5,956	1,000	2,000	1,000	1,000	8,044	31,956
130-09-00	9. Office Equipment	50,000	1,083	-	3,000	8,000	3,000	7,000	1,917	24,000	1,000	1,000	-	-	10,000	40,000
130-10-00	10. Computer Electronic	50,000	-	-	-	-	-	-	-	50,000	-	-	-	-	-	50,000
130-11-00	11. Photocopy Machine	10,000	-	-	-	3,000	-	-	-	4,000	-	3,000	-	-	-	10,000
130-12-00	12. Grounds & Janitorial Equipment	25,000	154	-	-	-	-	-	7,000	9,846	1,000	2,000	2,000	3,000	10,154	14,846
130-13-00	13. Electronic Test Equipment	20,000	-	-	-	6,000	-	2,000	-	5,000	-	4,000	-	3,000	-	28,000
130-14-00	14. Plot Equipment	25,000	1,678	-	1,000	6,500	200	800	3,000	5,822	200	800	1,000	4,000	7,078	17,922
130-15-00	15. Desk Calculators	35,000	-	-	-	8,300	-	10,000	-	11,700	-	5,000	-	-	-	35,000
130-16-00	16. Dining, Kitchen Equipment (including Airconditioners)	50,000	6,190	-	-	28,000	-	-	-	15,810	-	-	-	-	6,190	43,810
130-17-00	17. Laundry	20,000	-	-	-	6,000	-	14,000	-	-	-	-	-	-	-	20,000
130-18-00	18. Books and Publications	7,800	-	-	-	3,800	-	4,000	-	-	-	-	-	-	-	7,800
	Sub-Total	3,299,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,872



## ICRISAT Budget Estimates 1973-1977 (Cont'd):

(5)

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total		
			Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	
140-00- E.	<u>OTHERS:</u>																
00																	
140-01-00	1. Architects' fees	611,000	-	-	172,000	20,000	145,000	5,000	155,000	-	114,000	-	-	-	-	586,000	25,000
140-02-00	2. Consultants' fees	50,000	-	-	2,500	20,000	2,000	13,000	2,000	10,500	-	-	-	-	-	6,500	43,500
140-03-00	3. Interior Decorator	20,000	-	-	-	-	-	-	5,000	2,000	5,000	2,000	5,000	1,000	15,000	5,000	
140-04-00	4. Landscaping	20,000	-	-	350	-	10,000	5,000	3,650	1,000	-	-	-	-	14,000	6,000	
	Sub-Total:	701,000	-	-	174,850	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500	
150-00- F.	<u>CONTINGENCIES:</u>	1,000,000	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	160,000	
00																	

\* Includes Architectural Fees for 1972



file  
ICRISAT

June 9, 1973

SUMMARY

ICRISAT CAPITAL BUDGET PROJECTIONS - 1972-1977

Budget Code	Item	Total Estimated Cost 1972-1977	ESTIMATES													
			Actual 1972		1973		1974		1975		1976		1977		TOTAL	
			Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
0%																
3.7	100-00-00 A. Site Development	495,000 390,268	104,732	-	184,400	10,000	100,000	-	70,868	-	15,000	-	10,000	-	485,000	10,000
11.3	110-00-00 B. Campus External Work. <i>(Contingencies)</i>	1,506,000 - 1,460,000 1,366,000	-	-	96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000	-	1,259,000	247,000
52.9	120-00-00 C. Building Construction	6,403,000	-	-	101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,900	87,100	150,000	5,000	5,386,200	1,016,800
26.8	130-00-00 D. Equipment	3,299,000 3,246,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,872
5.8	140-00-00 E. Others	701,000	-	-	174,850	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500
9.4	150-00-00 F. Contingencies	1,000,000 100	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	150,000
	TOTAL:	13,404,000	157,543	-	834,250	965,750	2,033,200	966,800	4,352,735	1,647,265	1,796,600	203,400	340,500	105,957	9,514,828	3,889,172

12,264,000  
157,543  
12,106,500  
1,146,000

Rs. 1 = \$ 0.1225  
(Jan 2, 1974)

29%

G-7

ICRISAT BUDGET ESTIMATES - 1973-1977

Budget Code	Description	Budgeted	Actual 1972		1973		1974		1975		1976		1977		Total	
		Total Cost 1972-1977	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>100-00-00A. SITE DEVELOPMENT</b>																
100-01-00	1. Temporary structures	40,000	14,427		11,200		4,000		5,373		2,000		3,000		40,000	
100-02-00	2. Fences	31,000	25,464		2,300		1,000		1,236		-		1,000		31,000	
100-03-00	3. Roads unpaved and culverts	15,000	7,297		7,500		-		203		-		-		15,000	
100-04-00	4. Drainage	11,000	2,927		7,500		-		573		-		-		11,000	
100-05-00	5. Land Shaping	128,000	29,462		22,600		50,000		25,938		-		-		128,000	
100-06-00	6. Irrigation systems	81,000	16,453		31,900		18,000		6,647		8,000		-		81,000	
100-07-00	7. Irrigation equipment	34,000	8,237		14,800	10,000	-		963		-		-		24,000	10,000
100-08-00	8. Tank reclamation	80,000	-		37,600		12,000		25,400		5,000		-		80,000	
100-09-00	9. Relocation of Elec. power lines and Telephone lines	50,000	-		37,000		13,000		-		-		-		50,000	
100-10-00	10. Land Survey	25,000	465		12,000		2,000		4,535		-		6,000		25,000	
	Sub-Total:	495,000	104,732		184,400	10,000	100,000		70,868		15,000		10,000		485,000	10,000
<b>110-00-00B. CAMPUS EXTERNAL WORK</b>																
110-01-00	1. Earth movement	90,000			30,000		50,000		-		10,000		-		90,000	
110-02-00	2. Utilities & Services (Primary connections plus distribution)															
110-02-01	a) Water (Storage, Treatment Equipment)	196,000			34,000		35,000	15,000	67,000		45,000		-		181,000	15,000
110-02-02	b) Sewerage (including STP)	180,000			-		30,000		100,000		30,000		20,000		180,000	
110-02-03	c) Elec. including sub-stations and generators	350,000			23,000		50,000	30,000	85,000	77,000	85,000		-		243,000	107,000
110-02-04	d) Telephone and Radio	100,000			9,000	10,000	-		10,000	40,000	10,000	15,000	6,000		35,000	65,000
110-02-05	e) Gas bulk service	60,000			-		-		20,000	10,000	25,000		5,000		50,000	10,000
110-03-00	3. Road paved	390,000			-		90,000		180,000		70,000		50,000		390,000	
110-04-00	4. Contingencies	140,000			-		30,000	10,000	30,000	10,000	30,000	30,000	-		90,000	50,000
	Sub-Total:	1,506,000			96,000	10,000	285,000	55,000	492,000	137,000	305,000	45,000	81,000		1,259,000	247,000

(Cont'd)



## ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted	Actual 1972		1973		1974		1975		1976		1977		Total	
		Total Cost 1972-1977	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
120-00-00	<b>C. BUILDING CONSTRUCTION:</b>															
120-01-00	1. Administration:															
120-01-01	a) General	233,000					45,000	15,000	100,000	13,000	50,000	10,000	-	-	195,000	28,000
120-01-02	b) Library	93,000					20,000	5,000	35,000	8,000	22,000	3,000			77,000	16,000
120-01-03	c) Auditorium	82,000					17,000	3,000	35,000	7,000	17,000	3,000			69,000	13,000
120-01-04	d) Amphitheater															
120-02-00	2. Laboratory - Research	571,000					95,000	25,000	281,000	50,000	100,000	20,000			476,000	95,000
120-02-01	a) Laboratory - West - I															
120-02-02	b) " " - II															
120-02-03	c) Laboratory Benches(\$10-sq.ft.)	250,000					-	-	-	250,000	-	-			-	250,000
120-03-00	3. Laboratory - (Field Research)	545,000					95,000	25,000	265,000	40,000	100,000	20,000			460,000	85,000
120-03-01	a) Laboratory - West - III															
120-03-02	b) Crop Work Area															
120-03-03	c) Plant Quarantine															
120-04-00	4. Farm Service Unit/Physical Plant Services:															
120-04-01	a) General	478,000			85,000	-	125,000	25,000	223,000	20,000	-	-			433,000	45,000
120-04-02	b) Machinery Sheds															
120-04-03	c) Utility Services															
120-05-00	5. Dining Centre	219,000					40,000	10,000	100,000	19,000	44,000	6,000			184,000	35,000
120-06-00	6. Plant Growth Facility:															
120-06-01	a) Head House	153,000					30,000	10,000	60,000	13,000	35,000	5,000			125,000	28,000
120-06-02	b) Glass/Plastic Houses (4)	100,000					5,000	95,000	-	-	-	-			5,000	95,000
120-06-03	c) Screen Houses (4)	80,000			1,000	19,000	3,000	57,000	-	-	-	-			4,000	76,000
120-07-00	7. Warehouse	48,000					19,000	5,000	19,000	5,000	-	-			38,000	10,000
120-07-01	a) General															
120-07-02	b) Volatile Chemical Stores															
120-07-03	c) Chemical/Fertilizer Store															

(3)

## ICRISAT Budget Estimates - 1973-77 (Cont'd):

Budget Code	Description	Budgeted	Actual 1972		1973		1974		1975		1976		1977		Total	
		Total Cost 1972-1977	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.	Rupees	For.Ex.
	C. Building Construction (Cont'd):															
120-08-00	8. Commissary Store	13,000					5,000	1,000	5,000	2,000	-	-			10,000	3,000
120-09-00	9. Canteen	59,000					20,000	9,000	25,000	5,000	-	-			45,000	14,000
120-10-00	10. Laundry	15,000					4,000	1,000	4,000	1,000	4,000	1,000			12,000	3,000
120-11-00	11. Gate House	4,000					-	-	1,800	2,000	1,900	100			3,700	300
120-12-00	12. Sprayer Wash Unit	4,000					-	-	3,500	500	-	-			3,500	500
120-13-00	13. Covered Parking Space(s)	60,000					-	-	38,000	2,000	19,000	1,000			57,000	3,000
120-14-00	14. Recreational facilities (Prof. & Employee Staff)	82,000			15,000	-	20,000	10,000	30,000	7,000	-	-			65,000	17,000
120-14-01	a) Swimming Pools (2)															
120-14-02	b) Tennis Courts (4)															
120-14-03	c) Playing field(s)															
120-15-00	15. Incinerator	2,000					-	-	-	-	2,000	-			2,000	-
120-16-00	16. Housing:															
120-16-01	a) Dormitories	796,000					180,000	20,000	370,000	26,000	145,000	5,000	48,000	2,000	743,000	53,000
120-16-02	1) Flatlets															
120-16-03	b) Residences, Seprate	1,411,000					300,000	31,000	650,000	61,000	290,000	10,000	66,000	3,000	1,306,000	105,000
120-16-04	1) Director's Residence (1)															
120-16-05	2) International Staff (20)															
120-16-06	3) Essential Support Staff (45)															
120-16-07	c) Apartment	110,000					25,000	5,000	44,000	6,000	28,000	2,000	-	-	97,000	13,000
120-16-08	d) Guest House/Club	82,000					15,000	5,000	35,000	7,000	19,000	1,000	-	-	69,000	13,000
120-16-09	e) Other Support Staff (44)	133,000					27,000	3,000	70,000	3,000	30,000	-	-	-	127,000	6,000
120-17-00	17. Common areas (30% of total occupied less housing area)	780,000					200,000	-	374,000	-	170,000	-	36,000	-	780,000	-
	Sub-Total:	6,403,000			101,000	19,000	1,290,000	360,000	2,768,300	545,700	1,076,800	87,100	150,000	5,000	5,386,200	1,016,800

(Cont'd)



ICRISAT Budget Estimates 1973-77 (Cont'd):

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
130-00-00	D. EQUIPMENT:															
130-01-00	1. Scientific Equipment (Lab.)	1,192,200	63	-	30,000	270,000	30,000	345,000	50,000	387,137	2,000	13,000	5,000	60,000	117,063	1,075,137
130-02-00	2. Furniture:															
130-02-01	a) Household (Incl. Lamps and Drapes)	125,000	12,126	-	-	-	-	-	75,000	27,874	8,000	2,000	-	-	95,126	29,874
130-02-02	b) Dormitory	95,000	-	-	-	-	-	-	80,000	10,000	4,000	1,000	-	-	84,000	11,000
130-02-03	c) Guest House	9,000	273	-	-	-	-	-	5,000	1,727	1,500	500	-	-	6,773	2,227
130-02-04	d) Office	350,000	2,898	-	45,000	15,000	-	-	200,000	62,102	15,000	5,000	3,000	2,000	265,898	84,102
130-02-05	e) Library	25,000	-	-	-	-	-	-	5,000	18,000	1,000	1,000	-	-	6,000	19,000
130-02-06	f) Dining Centre	40,000	-	-	-	-	-	-	25,000	13,000	1,000	1,000	-	-	26,000	14,000
130-02-07	g) Auditorium	30,000	-	-	-	-	-	-	25,000	5,000	-	-	-	-	25,000	5,000
130-02-08	h) Class room	10,000	-	-	-	-	-	-	10,000	-	-	-	-	-	10,000	-
130-03-00	3. Materials Base Stock	100,000	-	-	15,000	15,000	5,000	5,000	20,000	25,000	5,000	5,000	2,500	2,500	47,500	52,500
130-04-00	4. Tractor & field Equipment	415,000	9,412	-	45,000	300,000	5,000	15,000	15,000	25,588	-	-	-	-	74,412	340,588
130-05-00	5. Vehicles (Autos, Pickups, Lorries and Buses)	450,000	15,988	-	20,000	145,000	5,000	75,000	15,000	166,961	-	-	-	7,051	55,988	394,012
130-06-00	6. Communication & Information (Printing, Photo & Audiovisual Equip)	65,000	-	-	2,000	13,000	5,000	15,000	10,000	20,000	-	-	-	-	17,000	48,000
130-07-00	7. Shop Equipment	60,000	2,902	-	23,000	12,000	7,000	3,000	8,000	4,098	-	-	-	-	40,902	19,098
130-08-00	8. Tools Base Stock	40,000	44	-	4,000	18,000	1,000	5,000	1,000	5,956	1,000	2,000	1,000	1,000	8,044	31,956
130-09-00	9. Office Equipment	50,000	1,083	-	3,000	8,000	3,000	7,000	1,917	24,000	1,000	1,000	-	-	10,000	40,000
130-10-00	10. Computer Electronic	50,000	-	-	-	-	-	-	-	50,000	-	-	-	-	-	50,000
130-11-00	11. Photocopy Machine	10,000	-	-	-	3,000	-	-	-	4,000	-	3,000	-	-	-	10,000
130-12-00	12. Grounds & Janitorial Equipment	25,000	154	-	-	-	-	-	7,000	9,846	1,000	2,000	2,000	3,000	10,154	14,846
130-13-00	13. Electronic Test Equipment	20,000	-	-	-	6,000	-	2,000	-	5,000	-	4,000	-	3,000	-	28,000
130-14-00	14. Plot Equipment	25,000	1,678	-	1,000	6,500	200	800	3,000	5,822	200	800	1,000	4,000	7,078	17,922
130-15-00	15. Desk Calculators	35,000	-	-	-	8,300	-	10,000	-	11,700	-	5,000	-	-	-	35,000
130-16-00	16. Dining, Kitchen Equipment (including Airconditioners)	50,000	6,190	-	-	28,000	-	-	-	15,810	-	-	-	-	6,190	43,810
130-17-00	17. Laundry	20,000	-	-	-	6,000	-	14,000	-	-	-	-	-	-	-	20,000
130-18-00	18. Books and Publications	7,800	-	-	-	3,800	-	4,000	-	-	-	-	-	-	-	7,800
	Sub-Total.	3,299,000	52,811	-	188,000	857,600	61,200	500,800	555,917	898,621	40,700	46,300	14,500	82,551	913,128	2,385,672

## ICRISAT Budget Estimates 1973-1977 (Cont'd):

(5)

Budget Code	Description	Budgeted Total Cost 1972-1977	Actual 1972		1973		1974		1975		1976		1977		Total	
			Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.	Rupees	For. Ex.
140-00-00	E. OTHERS:															
140-01-00	1. Architects' fees	611,000	-	-	172,000	20,000	145,000	5,000	155,000	-	114,000	-	-	-	586,000	25,000
140-02-00	2. Consultants' fees	50,000	-	-	2,500	20,000	2,000	13,000	2,000	10,500	-	-	-	-	6,500	43,500
140-03-00	3. Interior Decorator	20,000	-	-	-	-	-	-	5,000	2,000	5,000	2,000	5,000	1,000	15,000	5,000
140-04-00	4. Landscaping	20,000	-	-	350	-	10,000	5,000	3,650	1,000	-	-	-	-	14,000	6,000
	Sub-Total:	701,000	-	-	174,850	40,000	157,000	23,000	165,650	13,500	119,000	2,000	5,000	1,000	621,500	79,500
150-00-00	F. CONTINGENCIES:	1,000,000	-	-	90,000	29,150	140,000	28,000	300,000	52,444	240,000	23,000	80,000	17,406	850,000	150,000

\*Includes Architectural Fees for 1972



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Mr. Graves

3 FOR GRAVES REQUIREMENTS AS ALREADY CABLED FOR 1974  
IN DOLLARS THOUSANDS ARE ICRISAT CORE 2600 CAPITAL 3000  
IRRI CORE 3211 CAPITAL 970

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440098 IBRD UI



# Record Removal Notice

<b>File Title</b> CGIAR - G-7 - International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) - Correspondence 72/74-04		<b>Barcode No.</b>  1760849		
<b>Document Date</b> JUNE 6 <del>November</del> 9, 1973	<b>Document Type</b> Letter			
<b>Correspondents / Participants</b> To: Paal Bog From: Harold Graves				
<b>Subject / Title</b> ICRISAT Governing Board				
<b>Exception(s)</b> Financial Information iv				
<b>Additional Comments</b>		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><b>Withdrawn by</b> Sherrine M. Thompson</td><td><b>Date</b> April 12, 2021</td></tr></table>	<b>Withdrawn by</b> Sherrine M. Thompson	<b>Date</b> April 12, 2021
<b>Withdrawn by</b> Sherrine M. Thompson	<b>Date</b> April 12, 2021			



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June 2, 1973

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Mr. Graves  
Mr. Urquhart's Office

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WASHINGTONDC

ONE FOR GRAVES ESTIMATED ICRISAT 1974 CORE BUDGET TWO POINT SIX  
MILLION STOP CAPITAL THREE MILLION EXCLUDING POSSIBLE TEN PER  
CENT COST INFLATION WHICH HOWEVER MAY BE OFFSET BY SLIPPAGE STOP  
WE PROCEEDING MANILA JUNE THIRD REGARDS

EVANS

COL LT 1974V

63a

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

Deres ref.  
Your ref.

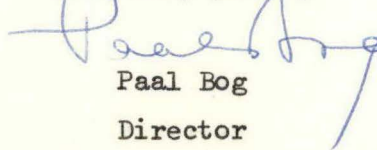
Vår ref. J.I.3247/73 PB/kgm  
Our ref.

Dato: 1 June 1973  
Date:

Dear Mr. Graves,

The Norwegian Parliament has appropriated an amount of Norwegian Kroner 1.000.000 as a contribution to ICRISAT for 1973. Kindly let me know what would be the appropriate channel for payment of the contribution.

Sincerely yours,



Paal Bog

Director

Planning Department

207708-2 28 3:51



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

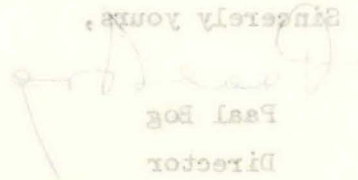
Date: 1 June 1973

Vit tel: 1.1.324773 PB/KEM  
 Out tel:

Date tel:  
 Your tel:

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 Paul Bog  
 Director  
 Planning Department

1973 JUN -5 PM 3:21