INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT
WASHINGTON, D.C. 20433, U.S.A.

OFFICE OF THE PRESIDENT

488/5 1210

IBRD-252/64-2

November 19, 1970

Mr. McGeorge Bundy
President
Ford Foundation
477 Madison Avenue
New York, New York 10022

Dear Mr. Bundy:

Subject: Meeting on January 14-15, 1971 to Organize Long-Term Support for International Agricultural Research

There has been, over the past few years, a growing awareness of the need to strengthen research in, and on behalf of, agriculture in the developing countries. This is reflected in the recommendations of the Pearson report and in the reports of the UN Committee on Science and Technology.

In recognition of this need, we suggested, in October 1969, that FAO, the UNDP, and the World Bank should jointly attempt to organize a long-term program of support for agricultural research, with special emphasis initially on international and regional research institutes. Since that time, there have been a number of exchanges of view as to how this proposal might best be implemented, both among the Agencies, and with potential donor countries and the private Foundations which have up to now played a leading role in this field. There has also been a meeting of senior technical personnel representing countries and organizations interested in the proposal, at which an attempt was made to identify the main gaps in agricultural research and the priorities for international support. A report of this meeting, held at Bellagio in February 1970, is attached as Annex 1. This highlighted the fact that, despite the important achievements of international supported research in raising yields of wheat, maize and rice, the battle to increase agricultural production in the developing countries to a satisfactory level is far from being won. Continuing (and indeed enhanced) international support will be needed to realize food and nutritional objectives. FAO's review of the State of Food and Agriculture in 1970, now in course of preparation, will provide further confirmation.

The time now seems right for a discussion among all interested parties on how best to arrange for effective, long-term support for international and regional agricultural research efforts. Accordingly, on behalf of the Administrator of UNDP and the Director-General of FAO, I should like to

invite your organization to send a representative to a meeting to be held at the Headquarters of the World Bank in Washington, D.C., on January 14 and 15, 1971, to discuss this problem. A provisional agenda for the meeting is attached as Annex 2, and a list of the governments and organizations being invited to the meeting is contained in Annex 3.

There is enclosed (Annex 4) a paper prepared by the staff of FAO and the Bank, in agreement with the UNDP, designed to serve as a basis for the discussion of item 7 on the agenda. This paper suggests what might be the objectives, composition, organization and functions of a grouping of interested parties to consider priorities for international (including regional) agricultural research and upon the financing thereof.

I would appreciate your advising Mr. Demuth, Director, Development Services Department, as soon as possible whether your organization will be represented at the meeting, and if so, the name(s) of your representative(s). Further documentation for the meeting, including any papers which participants may wish to present, will be supplied at a later date.

I am looking forward to hearing from you.

Sincerely,

(Signed) Robert S. McNamara

Robert S. McNamara

Mr. Abdel Wahab Labidi
African Development Bank
B.P. 1387
Abidjan, Ivory Coast

Mr. Takeshi Watanabe
Asian Development
P.O. Box 126
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Inter-American Development Bank
808 - 17th Street, N.W.
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Mr. George Harrar, President
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Mr. McGeorge Bundy, President
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Mr. Edwin Martin
Chairman of the Development Assistance Committee of OECD
2 rue Andre Pascal
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Mr. Jean Francois Deniau
Chairman of the European Development Fund
Member of the Commission of the European Economic Communities
200 rue de la Loi
Brussels 4, Belgium

His Excellency Ambassador of Switzerland
Felix Schnyder ~~Embassy of~~
2900 Cathedral Avenue, N.W.
Washington, D.C. 20008

OFFICE MEMORANDUM

TO: Executive Director for Italy, Australia, Austria, Belgium, Canada, Denmark, France, Germany, Japan, Netherlands, Norway, Sweden, Switzerland, UK, US

DATE: November 19, 1970

FROM: Robert S. McNamara

SUBJECT: Meeting on January 14-15, 1971 to Organize Long-Term Support for International Agricultural Research

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The time now seems right for a discussion among all interested parties on how best to arrange for effective, long-term support for international and regional agricultural research efforts. Accordingly, on behalf of the Administrator of UNDP and the Director-General of FAO, I should like to invite your Government to send a representative to a meeting to be held at the Headquarters of the World Bank in Washington, D.C., on January 14 and 15, 1971, to discuss this problem. A provisional agenda for the meeting is attached as Annex 2, and a list of the governments and organizations being invited to the meeting is contained in Annex 3.

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the objectives, composition, organization and functions of a grouping of interested parties to consider priorities for international (including regional) agricultural research and upon the financing thereof.

I would appreciate your advising Mr. Demuth, Director, Development Services Department, as soon as possible whether your Government will be represented at the meeting, and if so, the name(s) of your representative(s). Further documentation for the meeting, including any papers which participants may wish to present, will be supplied at a later date.

(Signed) Robert S. McNamara

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. McNamara

DATE: November 12, 1970

FROM: Richard H. Demuth

SUBJECT: International Agricultural Research - Organizational Meeting of Consultative Group

In the absence of objections from the Executive Directors to your proposals to convene a meeting as indicated above (your memorandum of October 30, 1970, R70-207, copy attached), I have consulted with, and obtained agreement from, FAO and UNDP on the text of an invitation, a Provisional Agenda and other relevant documents for such a meeting. These documents are attached for your consideration. If you approve them, I will have the final invitations to the countries and organizations listed in Annex 3 prepared for your signature early next week.

Attachments

cc: Mr. Evans
Mr. Mendels

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

CONFIDENTIAL

R70-207

FROM: The President

October 30, 1970

MEMORANDUM TO THE EXECUTIVE DIRECTORS

Subject: Proposed International Agricultural Research Consultative Group

In my memorandum of August 7, 1970 (R70-161), I informed the Executive Directors of my intention to consult further with those governments which had expressed reservations concerning my suggestion that a Consultative Group, to be co-sponsored by the Bank, FAO and the UNDP, be organized to consider the content and funding of a program of international research activities to support agriculture in the developing countries.

These consultations have taken place. I am pleased to report that the French and German Governments, which had expressed the strongest reservations to my proposal, have now indicated that they would interpose no objection to the Bank, acting in conjunction with FAO and UNDP, convening a preliminary meeting of interested governments, international institutions and private organizations to consider the establishment, terms of reference and organizational arrangements for an International Agricultural Research Consultative Group or some comparable mechanism. These governments have also advised me that they intend to participate in this preliminary meeting with the understanding that opportunity will be provided to all participants to raise any relevant issue for discussion, and without prejudice to the question of their ultimate participation in a Consultative Group, should the result of the meeting be a decision to create one. I have also consulted the Executive Directors for the Netherlands and Australia, who have advised me that they are agreeable to the convening of such a meeting.

Distribution:
Executive Directors and Alternates
President
President's Council
Executive Vice President, IFC
Vice President, IFC
Department Heads, Bank and IFC

This whole matter was considered at some length by the meeting of the Committee of the Whole on July 30, in connection with my memorandum on Pearson Commission Recommendations Nos. 24 and 27 (Sec M70-92, dated March 6, 1970) and my earlier memoranda on the subject of international agricultural research (Sec M70-141, dated March 31, 1970 and Sec M70-247, dated May 27, 1970). In view of the consensus that we should now proceed, I do not propose to schedule a further discussion by the Board at this time unless any Executive Director wishes me to do so, in which event I would appreciate his so advising the Secretary by November 6 , 1970. In the absence of such advice, I shall, in cooperation with FAO and UNDP, issue invitations to a preliminary meeting of the kind described in the previous paragraph, which I hope can be held in early January 1971.

Robert S. McNamara

~~DRAFT~~

November 4, 1970

TO: Executive Director for the United Kingdom

FROM: Robert S. McNamara

SUBJECT: Meeting on January 14-15, 1971 to Organize Long-Term Support for International Agricultural Research

There has been, over the past few years, a growing awareness of the need to strengthen research in, and on behalf of, agriculture in the developing countries, and that if this is to be achieved additional financial and technical assistance will be required from the developed countries. This is reflected in the recommendations of the Pearson report and in the reports of the UN Committee on Science and Technology.

In recognition of this need, I suggested, in October 1969, that FAO, the UNDP, and the World Bank should jointly attempt to organize a long-term program of support for agricultural research, with special emphasis initially on appropriately organized and financed international and regional research institutes. Following this initiative, and acceptance in principle by the other two Agencies, there have been a number of exchanges of view as to how this proposal might best be implemented, both among the Agencies, and at a wider level with potential donor countries and with those private Foundations which have up to now played a leading role in this field. There has also been a meeting of senior technical personnel representing countries and organizations interested in the proposal, at which an attempt was made to identify very provisionally main gaps in agricultural research and priorities for international support, and to follow this up with feasibility studies on some of the key problems. [1] This highlighted the fact that, despite the important

[1] A report of this meeting, held at Bellagio in February 1970, is attached as Annex 1.

achievements of international supported research in raising yields of wheat, maize and rice, the battle to increase agricultural production in the developing countries to a satisfactory level is far from being won, and that continuing (and indeed enhanced) international support will be needed to realize food and nutritional objectives. FAO's review of the State of Food and Agriculture in 1970, now in course of preparation, will provide further confirmation.

The time now seems right for a discussion among all interested parties on how best to arrange for effective, long-term support for international and regional agricultural research efforts. Accordingly, on behalf of the Administrator of UNDP and the Director-General of FAO, as well as on my own behalf, I am pleased to invite your Government to send a representative to a meeting to be held at the Headquarters of the World Bank in Washington, D.C., on January ~~13~~ 14 and ~~14~~ 15, 1971, to discuss this problem. A provisional agenda for the meeting is attached as Annex 2, and a list of the governments and organizations being invited to the meeting is contained in Annex 3.

There is enclosed (Annex 4) a paper prepared by the staff of FAO and the Bank, in agreement with the UNDP, designed to serve as a basis for the discussion of item 7 at the meeting. This paper suggests what might be the objectives, composition, organization and functions of a grouping of interested parties to consider and seek to agree upon priorities for international (including regional) agricultural research and upon the financing thereof. For convenience, the proposed grouping is referred to in the attached paper as "International Agricultural Research Consultative Group."

I would appreciate your advising Mr. Demuth, Director, Development Services Department, as soon as possible whether your Government will be

represented at the meeting, and if so, the name(s) of your Government's representative(s). Further documentation for the meeting, including any papers which participants may wish to present, will be supplied at a later date.

ANNEX I

ACCELERATING AGRICULTURAL MODERNIZATION IN DEVELOPING NATIONS

A Summary of Findings and Suggestions of
Agriculturists from Development Assistance Agencies
Villa Serbelloni, Bellagio, Italy
February 3-6, 1970*

THE CURRENT SITUATION

In the past couple of years the agricultural sector of many developing countries has exhibited a new vitality, especially in cereal production. Contrary to the situation of a few years ago, this vitality has reached to farms usually considered traditional, even subsistence, in their production patterns. The increased output has made a substantial contribution to national economic growth, to the material well-being of peoples, and to total development.

It is likely that the altered technologies from which this so-called green revolution has sprung will continue to play a significant role in expanding food output in many countries in the next few years. Continued research on the adaptation of new varieties of wheat and rice (and the practices that must accompany their use) to local environments and to major pests and pathogens will permit a wider diffusion of production benefits among farmers and better protection of existing yields on the farms of present adopters. Indeed in some countries there is an imminent or intermediate term prospect that production will exceed domestic demand causing low farm product prices as well as strains on national and international marketing systems and older patterns of trade. The new farm technologies and their potential high productivity may create or aggravate regional disparities in per capita incomes. Also, they may reveal in stark terms some of the issues of equity surrounding national patterns of income and wealth distribution, and may contribute to further rural under-employment or unemployment, exacerbating urban migrations of rural peoples or rural social and political unrest. These are real problems which cannot be ignored and which should be urgently addressed.

In the longer term, however, the seemingly inexorable growth of world populations creates needs that will overshadow the short-run difficulties accompanying the new technologies. Present growth rates of population in Asia alone will add over 30 percent to its close to one billion people (excluding Mainland China) in the next ten years. To feed these new mouths and to ensure the necessary

*Conference sponsored by the Rockefeller Foundation as a follow-up to an earlier Agricultural Development Conference at the same location, April 23-25, 1969. See proceedings of 1969 conference as published by the Rockefeller Foundation.

agricultural contribution to economic growth of nations requires a very much broader foundation than is now available. More modern farm technology and a larger pool of manpower trained and skilled in the science and technology of farm production methods are required. These long run problems set the backdrop for the conference. Specific concern centered on feeding more people to a better nutritional standard, of providing assurance that agriculture continues to play a strongly contributive role in national economic development by growing apace with the economy and by offering gainful employment to large numbers of people irrespective of their command over personal land or capital resources.

A year ago, prospects of local wheat and rice surpluses in areas which were formerly food deficit were viewed as a possible problem. This is an important matter. But now the concerns are more generally: (a) whether over the decade of the 70's a rate of increase of 3 or 4 percent in grain output can be sustained in nations such as India and (b) whether in the developing nations available diets can in fact be improved in the face of unrelenting population increases.

The impact of existing improved wheat and rice production technologies necessarily will be limited to areas with reasonably assured water (or drainage) for crop growth. Vast land areas suited to other crops or other systems of farming as yet remain untouched by modern technologies and will remain so unless present research endeavors are intensified and strengthened. The experience of the past few years has indicated that traditional farmers will modernize their agriculture as rapidly as their personal resources and inherent propensity to caution will permit when:

1. markedly superior production technologies are available in comprehensive packages that have been adapted, tested and demonstrated as applicable for local use; and

2. favorable input to product price relationships prevail and can be expected to be maintained for two or three production seasons so that the risks of innovation are reduced and the costs associated with learning new techniques can be re-couped; and

3. efforts are coordinated successfully to provide the needed inputs at the time and place required and to assure product markets close to the farmer; and

4. an atmosphere of commitment to rural development and the initiative for its implementation are forthcoming from government.

In the case of small or tenant farmers, provisions of credit or security of tenure may be necessary to overcome resource shortages or to redress the disincentives of sharecropping.

The problem seems not to be the farmer. The focus of attention must be on the productive sureness of the proferred technological package, on the incentives in its profitability, on the infrastructure of market and other rural services available to the cultivator to support his decision for progress, and on the national ethos for development.

ANALYSIS

Recognizing the necessary role that research-generated, superior technology must play in agricultural advance, an illustrative (and very impressionistic) inventory of research needs was attempted (Table I). This tabulation of enterprises and functions by geographic areas is neither complete nor verified. It does indicate, however, judgments of relative need. Note the almost consistent three star rating (greatest need) for sorghums, grain legumes, tropical root crops, tropical livestock systems and water management. Note also the need to broaden the present relatively strong position of wheat and rice under controlled irrigation to embrace production technologies suited to harsher agricultural environments so that many more cultivators may participate in the harvest of development.

Before evolving specific suggestions in the research, training and program areas, some general guidelines were developed. While only partially spelled out here, they reflect the group's experience:

1. On-farm trials should be an integral component of national research undertakings. Extension or action types of rural production programs should be preceded by on-farm field verification trials to be certain that locally adapted, superior packages of technology are available, understood and profitable.

2. The national research-field verification trial system can often, if it takes care to do so, generate improved production packages which are suitable for small holdings as well as for larger farm units.

3. Understanding and involvement of policy makers are essential if an economic and political environment conducive to change is to be created. Involvement of state, regional and central planning bodies may be of critical importance.

4. Several types of institutional arrangements for technical-vocational and college level agricultural training, research and advisory services can work satisfactorily (e.g., Japanese, Taiwanese, U. S., Canadian, French, British, and other models). Identification and performance of essential functions rather than the institutional model itself are the important issues. Included here is a realistic projection of trained manpower needs by categories; plans to bring needed manpower on stream; training institutions which are production oriented with provision for useful internship type of experience or its equivalent.

5. Regional research (as contrasted to national or international) centers or programs logically have a role to play. For a variety of reasons, especially the difficulty of creating and maintaining multidisciplinary institutions, they have thus far achieved only modest success on the whole. Indeed, many of the essential regional functions might be better performed by a national institution which has an open policy of rendering regional services. Regionally-oriented institutions can work well where:

   a) the users demand the institutions or programs and are willing to participate in their financing;

   b) the institutions or programs are genuinely responsive and useful to its user cooperators;

   c) leadership is effective;

   d) personnel of high quality are engaged;

   e) working linkages are effectively forged so that each institution has political influence for development;

   f) the management and staff pursue a cohesive mission-oriented research doctrine with consistency and continuity.

6. International Centers of the IRRI-CIMMYT-CIAT-IITA type should be fully supported so long as their performance merits it. In addition, the potential contribution of possible new centers should be carefully assessed (see Suggestions below). International centers were viewed as institutional innovations designed to speed national development and to serve as tools to assist the building of stronger, harder-hitting national research programs and national problem-solving capabilities.

7. Information retrieval and dissemination in agricultural research and development experience among nations is haphazard at best. Reliance is placed upon obsolete communication technology. This frequently precludes the use of that which is already known or somewhere available and slows the pace of technological development (see Suggestions below).

8. While technological research on production and marketing properly seeks to increase agricultural productivity, the target of more rapid national output growth need not necessarily be in conflict with the larger goals of social justice. Strategies should be such as to minimize trade-offs between growth, which is essential, and the limited spread of the benefits of growth. Because widespread participation of the population in development is sought, greater depth in policy and development management analysis is needed.

SUGGESTIONS

Considering the current situation, the analysis made above, the rough approximations made in Table I, and the record of deliberations of the April 1969 Bellagio Conference, the following suggestions are advanced:

I. Fund Existing International Centers

1) Secure current and forward operational budgets of the four existing international research and training centers -- IRRI, CIMMYT, CIAT, IITA.

2) Explicitly encourage these centers to extend their work to the problems of the people who live and likely will continue to live in less advantaged situations -- small farms, poor land, high risk.

Means: As finance for expanded research beyond the capacity of the Foundations is clearly required an organization for funding is desirable. It is suggested that tentative proposals by the IBRD involving a consortium or consultative group or groups be examined and resolved, keeping in mind the need: 1) to encourage multilateral and bilateral donors to participate in the necessary funding and 2) to make decisions arising out of other suggestions in this paper.

II. Determine Potential Usefulness of New "Center-type" Thrusts

Establish two- to three-man task forces to determine the feasibility and potential usefulness of new international centers or of alternative devices to

accelerate research and training on the following (priorities depending upon feasibility studies):

a) water management as related to crop production;

b) food legumes (grains, oilseeds and pulses);

c) starchy root crops;

d) livestock systems in Southeast Asia;

e) upland crops in Asia -- sorghums, grain legumes, corn (maize), millet, barley, and appropriate cropping systems;

f) farming systems suitable to the semi-arid areas of West Asia and Africa;

g) policy, management and analysis of socio-economic and development strategy problems.

Means:

1) Present to the April 1970 Conference at Bellagio such analyses as are available to be used for illustrative purposes, e.g., water management;

2) Invite the Foundations and other appropriate bodies to establish one or more task forces to work in consultation with possible donors;

3) Establish funding sources for task force work and proceed with an analysis of funding opportunities for one or more new thrusts of the type listed.

III. Give Economic and Social Problems Special Attention

Identify key problems for study in the economic and social disciplines and determine suitable centers for work on these on a project basis.

Means:

1) A task force analysis should be considered consistent with the measures suggested in II;

2) Request the Foundations and other groups to report on preliminary thinking.

IV. Involve Key Scientists in Structural Workshops

Arrange well prepared workshops which bring together key groups of persons, and especially those working in isolated situations who are actively researching particular crop, animal or functional problems to:

a) assess the present status of research;

b) identify key limiting factors;

c) identify internship training opportunities:

d) facilitate international cooperative work and the exchange of information and research materials.

Means:

1) One institution such as FAO or the UNDP plan, fund and conduct a trial workshop as a learning pilot experience. This could begin with an examination of the "Rice Outlook for the 70's" as a source of procedural ideas. The trial workshop should be carefully evaluated. If the findings are favorable, a program of, say, two per year might be launched.

2) Fund (from some source or sources) a national research center or academy of science to undertake one or a series of such workshops.

3) Combine 1) and 2) or request present international centers to organize and conduct such workshops even though the subject matter is not necessarily the specialty of the center. Arrange funding.

V. Support Informational and Related Services for Researchers

1) Review the status of efforts intended to improve agricultural research information management systems.

2) Review the steps necessary to strengthening research support services by building better and more embracive information and statistical files of research and development experience, by encouraging the establishment of germ plasm banks, by continuing and further developing agro-meteorological and other programs which will lead to a better understanding of the ecological environment for agriculture.

Means: Invite FAO to follow-up and present a report to the April 1970 Bellagio meeting.

VI. Continue to Emphasize Training

1) Continue and expand existing fellowship and other training programs which select and send trainees to international centers and other institutions offering specialized training in agricultural production technology.

2) Sponsor travel-study programs for scientists, policy makers, and others concerned with national and international agricultural development to permit visits to premier research centers and outstanding development programs for direct contact and observation.

Means: Invite international and bilateral agencies concerned to give sympathetic consideration to requests for such training assistance noting the usefulness of FAO experience in this respect.

Legend:

O — Present technical knowledge is generally adequate to support production extension programs where the idiosyncrasies of the farming environment do not demand specially designed or particularly adapted research results.

\+ — There seems to be a general deficiency in present technical knowledge of how to raise farm output. The number of + marks gives a rough indication of the relative extent of the deficiency, +++ indicating the greatest need for more research, and ++ and + indicating respectively lower levels of need.

? — Situation unknown to the authors of the table.

\- — The subject matter is not relevant to the farming of the geographic region.

* This table must be used with great caution. It was not discussed fully at the Conference and little attempt was made to probe its contentions or verify its pretensions. It was presented to the Conference as a rough "cocktail session" outline of problems areas as seen by Oram, Fournier and Hopper. It reflects impressions, experience and conference suggestions. The authors and many members of the Conference suggested the need for greater subject matter and geographic detail. Greater detail was not included, however, because more "boxes" would have led to more question marks and, perhaps, to even greater errors of judgment. The table was appended to the Conference summary because, for all its limitation, it was found useful as a first approximation exposure of needed agricultural research.

In developing the table, the authors discussed and then specifically excluded consideration of plantation food crops. The exclusion is not a reflection of the unimportance of these crops as food sources in many areas of the world. The decision to exclude them from the table was taken purely on pragmatic grounds of the inadequacy of the authors' own knowledge about them and the need to keep the table within reasonable bounds.

It should be pointed out that the table does not indicate the relative importance of each subject matter item in the agriculture or in the agricultural development opportunities of a given geographic region. It is only a rough ranking of the adequacy of the technical knowledge available upon which to found the acceleration of agricultural modernization.

Table I. An Impressionistic View of the Need or Adequacy of Present Technical Knowledge for Accelerating Farm Production of Food Crops and Livestock, and for Improving Farm Productions Systems*

1. CROP-ORIENTED TECHNOLOGY - CEREALS

Crop	Monsoon Asia	South Asia	Near East N. Africa	Sudanian Africa	Tropical Africa	Tropical Latin America	Temperate Latin America	Andean & Mountain Areas	Comments
Rice									
Irrigated Controlled	0	0	0	+	–	0	0	–	
Deepwater	++	++	–	–	?	–	–	–	
Swamp	–	–	–	–	++	?	–	–	
Upland	+	+	–	++	+	+++	–	–	
Wheat									
Irrigated	–	0	+	+++	–	–	?	–	O in East
Rainfed Spring	–	+++	+++	–	0	–	+++	–	Africa
Rainfed Water	–	–	+++	–	–	–	–	+++	
Barley									
Rainfed Spring	–	+++	+++	–	–	–	?	–	
Rainfed Winter	–	–	++	–	–	–	–	?	
Millet									
Pennisetum	–	+++	–	+++	++	?	–	–	
Eleusine	–	++	–	–	++	?	–	–	
Sorghum									
Rainfed Humid	+++	+++	+++	+++	++	?	+	?	
Rainfed Semi-arid	–	+++	+++	+++	++	?	–	?	
Maize									
Irrigated	–	0	++	++	–	?	–	–	
Rainfed Humid	+++	++	++	++	+++	++	++	++	
Rainfed Semi-arid	–	+	–	–	+++	–	–	–	

2. CROP-ORIENTED TECHNOLOGY - OTHER CROPS

Leguminous Oilseeds			(1)						(1) Groundnuts
Groundnuts	+++	+++	+	0	+++	+++	++	–	irrigated in
Soya	+++	++		+++	+++	+++	?	+++	Near East

2. CROP-ORIENTED TECHNOLOGY - OTHER CROPS

Crop	Moonsoon Asia	South Asia	Near East N. Africa	Sudanian Africa	Tropical Africa	Tropical Latin America	Temperate Latin America	Andean & High Mountain	Comments
Grain Legumes									(1) Maybe unimportant because of adequate animal protein
Temperate	-	+++	+++	+++	-	-	?(1)	++	
Tropical	+++	+++		+++	+++	+++	+	+	
Tropical Root Tubers	++	+	-	-	+++	+++	-	-	
Plantains	++	+	-	-	+++	+++	-	-	
Irish Potatoes	-	++	0	-	-	-	?	+++	
Fruits and Vegetables									See Annex

3. LIVESTOCK-ORIENTED TECHNOLOGY

Tropical Bovines									
Breeding research using present fodders	+	++	++	+++	+++	++	0	?	
Fodder research using present breeds	+++	+++	+++	+++	+++	+++	+++	?	
Intensive animal management altering both fodders and breeds	+++	+++	+++(1)	+++	+++	+++	+++	?	(1) Mainly under irrigation
Pastoral animal management systems	-	+++	+++	+++	-	-	++	?	
Livestock processing and marketing	+++	+++	++	+++	+++	+++	+	?	
Pigs and poultry									See Annex

4. FARM PRODUCTION SYSTEMS TECHNOLOGY

Difficult Environments									
1. Low Rainfall Areas	+	+++	+++(1)	+++	-	-	-	-	1. and 2. can be tackled together in several countries of Near East & North Africa
2. High Mountain Areas	-	+	+++	-	++	-	-	+++	
3. Shifting Cultivation Areas	+++	+++	-	-	+++	+++	-	-	

4. FARM PRODUCTION SYSTEMS TECHNOLOGY (continued)

	Monsoon Asia	South Asia	Near East N. Africa	Sudanian Africa	Tropical Africa	Tropical Latin America	Temperate Latin America	Andean & Mountain Areas	Comments
4. Water Resources and Use									
Inventory of Water Resources	++	+++	++	+	+	?	?	-	
Methods of Water Exploitation	+	++	+++	+++	+	?	?	-	
Methods of On-Farm Water Management	+++	+++	+++	+++	++	+	?	-	
5. TECHNOLOGIES TO PREVENT LOSSES									
Grain Storage, Drying, Milling & Processing	+++	+++	+	+++	+++	+++	0	++	
Rodent Control (1)	+++	+++	?	?	?	?	?	?	Could this be on a project basis?

6. Subjects of Importance Requiring Attention

1. Fruit & Vegetable Crops: Needs a "systems" approach including production, marketing, and processing. Difficult to define priorities. Probably should be aimed at intensive work related to urban developments.
2. Multiple Cropping: Very important. Should it be a separate institute or part of programs of existing or proposed co-op oriented international stations? (This might also apply to "water use and management.")
3. Tropical Soil Fertility: Cover crops, shifting from shifting cultivation, fallows, etc. - Comments as 2 above.
4. Pigs and Poultry: Could this perhaps be handled by appropriate government services plus incentives to private industry?
5. Mechanization: Probably best studied by wings of existing or proposed institutes rather than a special one.
6. Employment: As 5 above, information being fed into a larger coordinated project contracted to an agency, or a university? Do we need some kind of "Agricultural Policy Institute"?
7. Water Pollution: Of growing concern. Agriculture both a main asset and a main polluter. Perhaps a "developed country" project.
8. Pesticide Pollution: Long-term toxic hazards for DDT, mercury, etc. Essential to find cheap, safe, effective substitutes: As 7 above.
9. Animal Disease Control: Especially those affecting large areas (F&M: Trypanosomiasis). Perhaps a program approach?

ANNEX 2

PROVISIONAL AGENDA FOR AGRICULTURAL RESEARCH MEETING
ON JANUARY 14-15, 1971

1. Adoption of the agenda.

2. Opening statement by the Chairman.

3. "Overview" by FAO representative of major weaknesses in present agricultural production and related research efforts in developing countries.

4. Report on bilaterally-supported research effort in or on behalf of developing countries. [To be compiled by IBRD on the basis of information supplied by bilateral agencies.]

5. Report by representatives of the Ford and Rockefeller Foundations on the four international agricultural research institutes being supported by them.1/

6. Progress report on feasibility studies now under way as a basis for possible new international agricultural research institutes.2/

1/ These institutes are CIMMYT (International Maize and Wheat Improvement Centre) in Mexico; IRRI (International Rice Research Institute) in the Philippines; CIAT (International Centre of Tropical Agriculture) in Colombia; and IITA (International Institute of Tropical Agriculture) in Nigeria.

2/ There are five such studies, i.e.,

(a) water management for crop production at the farm level;

(b) upland (i.e., rainfed) crops in S.E. Asia;

(c) food legumes;

(d) livestock diseases and wider problems of animal husbandry in Africa south of Sahara; and

(e) economic policies for rural development.

In addition, the Commonwealth Scientific Industrial Research Organization of Australia is considering work on livestock development in S.E. Asia.

7. Establishment of a possible International Agricultural Research Consultative Group or comparable mechanism, including its terms of reference, composition, organizational structure, financing and future procedures. [The Bank/FAO staff paper, dated November , 1970, entitled "Possible Objectives, Composition, and Organizational Structure of an International Agricultural Research ~~Institute~~ Consultative Group" will provide a basis for the discussion of this agenda item.]

8. Future action, including date and location of first regular meeting of Consultative Group or other comparable grouping, if decision is reached to create one, date and agenda of the first meeting of Technical Advisory Committee, if agreed upon, and action required from the Secretariat in preparation for these meetings.

9. Other business.

Washington, D. C.
November , 1970

ANNEX 3

LIST OF GOVERNMENTS AND ORGANIZATIONS INVITED TO AGRICULTURAL RESEARCH MEETING, JANUARY , 197 .

(14-15)

Countries

Australia
Austria
Belgium
Canada
Denmark
France
Germany
Italy
Japan
Netherlands
Norway
Sweden
Switzerland
United Kingdom
United States

Banks

Africa Development Bank
Asia Development Bank
Inter-American Development Bank

Foundations

Ford Foundation
Kellogg Foundation
Rockefeller Foundation

Intergovernmental Organizations

European Development Fund
Development Assistance Committee of OECD

Possible Objectives, Composition, and Organizational Structure of an International Agricultural Research Consultative Group

A. Objectives

1. The main objectives of a Group as envisaged by FAO, IBRD and UNDP would be:

(i) to examine the immediate needs for agricultural research in, or on behalf of, the developing countries and, over time, to study in depth the longer-term priorities;

(ii) to attempt to ensure maximum complementarity of international and regional efforts with national efforts in financing and undertaking agricultural research in the future;

(iii) to review the financial and other requirements of those international and regional research activities which the Group, ~~by voluntary agreement among its members, decides to support and to mobilize finance to meet those requirements,~~ taking into account the need to ensure continuity of research over a substantial period.1/

(iv) to undertake, with the help of a Technical Advisory Committee (TAC), a continuing review of priorities and research networks related to the needs of developing countries, to enable the Group to adjust its support policies to changing needs, and to achieve economy of effort; and

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1/ It is expected that, in the first instance, financial support by the Group would probably be directed towards expanding the activities of existing international and/or regional research institutes as required to meet urgent needs.

(v) to suggest feasibility studies of specific proposals on the advice of TAC, to reach mutual agreement on how these studies should be undertaken and financed, and to exchange information on the results.

B. Composition

2. The co-sponsors of the Group would be FAO, IBRD and UNDP. Its membership, in addition to the co-sponsors, would be composed of representatives of interested donor countries, the regional development banks, and private foundations which have supported, or are interested in supporting, international agricultural research in or for the developing countries. Other interested parties might be invited to join or to participate as observers, as decided by the members. The Chairman and Secretary of the Group would be provided by the IBRD, and its base would be in Washington; but the venue of its meetings would be decided from time to time by its members.

C. Supporting Services

(a) Technical Advisory Committee (TAC)

3. It is suggested that a Technical Advisory Committee be created by the Consultative Group, composed of technical representatives nominated by the Group, plus a limited number of advisers with special expertise, invited on an ad hoc basis to assist on particular problems. TAC would report to the Consultative Group.

4. TAC's terms of reference would be prescribed by the Consultative Group. As presently envisaged, TAC would, acting either upon reference from the Consultative Group or on its own initiative:

(i) advise the Consultative Group on the main gaps and priorities in agricultural research, both in the technical and socio-economic fields, based on the broad experience of its members;

(ii) recommend to the Consultative Group feasibility studies designed to explore in depth how best to organize and conduct agricultural research on priority problems, particularly those calling for international or regional effort;

(iii) examine the results of these or other feasibility studies and present its views and recommendations for action for the guidance of the Consultative Group;

(iv) advise the Consultative Group on the adequacy of specific international research programs, ~~finance for which was being sought from members of the Group;~~ and

(v) maintain a continuing review of needs and priorities in agricultural research, and submit to the Consultative Group such proposals as appear feasible to facilitate rational planning of effort in, or for, the developing countries to meet those needs.

5. It is envisaged that the Technical Advisory Committee would normally meet in Rome, and that its Secretary would be provided by FAO. FAO might also provide its chairman, or alternatively, a distinguished international scientist might be nominated by its members, or the chairmanship rotated amongst its members. It is hoped that agreement can be reached amongst the members of the Consultative Group to limit the size of the TAC in the interests of efficient working relations.

(b) The Secretariat

6. The Secretariat would be composed initially of the Secretary of the Consultative Group and the Secretary of the Technical Advisory Committee. Arrangements would be worked out to ensure liaison and collaboration between the two wings of the Secretariat.

D. Financial Arrangements

7. IBRD is prepared to pay for the personal services and travel costs of the Secretary of the Consultative Group, and FAO is prepared to pay for the personal services and travel costs of the Secretary of the TAC.

8. The co-sponsors are prepared to finance jointly the per diem and travel expenses of the special advisers to the TAC, but it is assumed that expenses of regular members of TAC would be covered by their respective countries or organizations.

9. Arrangements for financing future feasibility studies would be made by the Consultative Group or by individual members on an ad hoc basis.

Washington, D.C.

November 1970