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205680B Consultative Group on International Agricultural Research [CGIAR] - G-12 - International Board for Plant Genetic Resources [IBPGR] - Division Files - Volume 3 Mail 57:CGI018 AR SU MESSAGE FOR PEACOCK - RESPONSE TO LETTER. December 28, 1987

Dear Jim,

David Hopper will be responding to some of the questions in your letter of November 30 soon after the holiday. Meanwhile, I thought that I would handle the information points, as well as take up a question or two of my own.

The membership of the CGIAR committee on the IBPGR has changed a good deal, but not since Montpellier. Its members are Nyle Brady (US), Hans Wessels (Netherlands), Amir Muhammed (Pakistan/TAC), Louis Caudron (France) and Jim McWilliam (Australia). The chair is Hopper ex officio, and the chairman of TAC--Alex McCalla from the first of the year--is normally invited as an observer. Membership is personal rather than by country, so if there are any resignations the chairman of the Group will chose replacements. You have addresses for all of these people scattered in your documents, but if you want it on one list, just let us know and we will send it by CGNET. Or if you wish to communicate with them through me, I could forward a message. I expect to send them a note soon mentioning the brief discussion at Montpellier, and indicating that I will be reporting after your February board meeting, when it should be possible to tell what action will be needed.

That brings be to one of my own points: in planning my travels in the coming months, I have wondered whether I should include your board meeting in Rome. I would certainly do so if there seem likely to be significant issues where personal contact with the principals would be of value. ET York is planning to come, and if you expect that a recommendation for extension of the agreement with only modest changes is likely to be the result, I will probably be elsewhere that week. Trevor seemed to think it was not necessary for me to be on hand, but I did not catch Brader or Walton before the holidays. Please let me know your views. I had the impression at ICW that you thought some hard negotiations might be required.

The second question I can answer concerns the new IBPGR fellowships. We are very pleased that you have been able to create such a program, and would be glad to announce them from here whenever the material is in hand. We will consult about what might be done to reach the broadest relevant audience through the facilities of the Bank.

Finally, I wanted to fill you in on our plans for Berlin. With your schedule in mind, we have loaded Friday May 20 with both IBPGR items, that is a report on the FAO relationship and approval of the medium-term program. We are also holding over the discussion of biotechnology until that day, so that you would be able to comment. I hope this will hold, but do let me know if there is any change in your plans as we could always use a little flexibility.

You will miss the presentation by J. S. Schell of the Max Planck and the meeting of the CGIAR committee on the IBPGR, but there is nothing we can do about those.

I hope that you had a very happy Christmas, and wish you and yours all the best for the new year.

Sincerely, Curt.

To: W.TOSSELL (2020:U0G001) Cc: C.FARRAR (CGI005) Cc: IBPGR (CGI101) From: C.FARRAR (CGI005) Delivered: Fri 11-Dec-87 8:29 EST Sys 157 (25) Subject: IBPGR BOARD NOMINATIONS Mail Id: IPM-157-871211-076370998

Note for Bill Tossell

Bill, the purpose of this note is to make sure that all is on track in relation to the nominations for the IBPGR.

Based on your letter of October 15 we have circulated to the Group a request to approve Moctar Toure and John Spence as CGIAR appointed members of the IBPGR. Any objections must be received by January 11, 1987.

We have now received copies of letters dated November 24 from Dick van Sloten to Spence, Ochoa and Hunziker stating that they are being considered as CGIAR nominees, and giving them the dates of the meeting.

We have done nothing so far to consult the Group about Ochoa and Hunziker. And we are now a bit confused about the number of vacancies on the IBPGR board, and how they are to be filled.

Please advise.

Regards, Curt

copies in CG secretariat: Hall, Del Marr, Calvo

Disposition: de \*

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Please advise.

Regards, Curt

copies in CG secretariat: Hall, Del Marr, Calvo

Disposition: de \*

To: N.SMITH (CGI022) From: IBPGR (CGI101) Delivered: Fri 11-Dec-87 9:26 EST Sys 157 (16) Subject: Gene Banks and the World's Food Mail Id: IPM-157-871211-084990725

Dear Nigel,

Please pass this information on to Don Plucknett and to our friends in Princeton:

"On 8 December 1987 I had the opportunity of presenting a personal copy of "Gene Banks and the World's Food" to Dr. Yuri Vavilov, the surviving son of N.I. Vavilov. He is a physicist at the Lebedev Physical Institute in Moscow. He was delighted to receive a book which was dedicated to his Father."

I shall soon be "out-of-commission" until mid-January with going home for Cl stmas, the CGIAR Management Training Course, etc. Could I wish you and yours a very Happy Christmas and all the best for 1988.

AGP - PU 2/1 IBPGR

MAIL IBPGR AR, SU 1987 BELGIAN CONTRIBUTION/EVL

DATE: November 16, 1987 TO: Dr. J. Trevor Williams, IBPGR FROM: Hennie Deboeck-De Zutter, CGIAR SUBJECT: 1987 Belgian Contribution

AAA) WE HAVE BEEN INFORMED THAT 1987 BELGIAN CONTRIBUTION TO IBPGR IS BFR 5.0 MILLION FOR UNRESTRICTED CORE.

BBB) NO INFORMATION ON DISBURSEMENT DATE WAS PROVIDED.

REGARDS, HENNIE

.S .END

HDeboeck-De Zutter:ev1/File G12/Disk 2

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# MAIL IBPGR AR, SU 1987 CHINESE CONTRIBUTION/EVL

DATE: November 16, 1987 TO: Dr. J. Trevor Williams, IBPGR FROM: Hennie Deboeck-De Zutter, CGIAR SUBJECT: 1987 Chinese Contribution

WE HAVE INSTRUCTED WORLD BANK CASHIERS DEPARTMENT TO DEPOSIT USDOL 50,000 IN IBPGR'S ACCOUNT AT BANCA COMMERCIALE ITALIANA IN ROME. PLEASE INFORM US WHEN CONTRIBUTION HAS BEEN RECEIVED.

REGARDS, HENNIE

.S .END

HDeboeck-De Zutter:ev1/File G12/Disk 2

-Animeter Animeter To: C.FARRAR (CGI005) Cc: E.SULZBERGER (CGI004) From: IBPGR (CGI101) Delivered: Fri 20-Nov-87 4:04 EST Sys 157 (30) Subject: In House Review of IBPGR 20-22 January 1988 Mail Id: IPM-157-871120-036750420

CF 612

Dear Curt,

As I informed you earlier, IBPGR's in-house review is on public affairs (syn-publicity). We have had to change the dates from early December to late January.

Since IBPGR claims a "first" for a staff member for PR in the System and since genetic resources has been, continues to be and will be, for some time a hot issue, it would be advantageous if Ed. Sulzberger could attend. This would be to the mutual advantage of IBPGR and the System at large.

Following your earlier decision, I am seeking a new independent Chairman, possibly Bill Tossell.

I would appreciate your concurrence for Ed. to be in a position to come to Rome for this event. However, the decision is yours and whatever you decide I, of course, will respect it.

2. Andreas Papasolomontos

You may have heard he has resigned as Minister in Cyprus. He wants "more things to do" for the System and I pass this info. on to you following a recent meeting with him.

\* : 2

Best regards.

Trevor Williams

ACP - PR 3/11 IBPGR Public Affairs

1.1.4

MAIL CIP AR SU MESSAGE FOR CENTER DIRECTOR/CF Dr. Richard Sawyer, CIP To: From: Curtis Farrar, CG Secretariat Date: November 10, 1987 A check of secretarist files reveals no copy of your c.v. We quite probably have one somewhere, but if so cannot lay hands on it. Could you send along a recent c.v. so that we may have one for referance? Thanks and regards, Curtis Farrer . 8 MAIL IBPGE AR SU MESSAGE FOR CENTER DIRECTOR/CF Dr. Trevor Williams, LBPGR Tot Curtis Farrar, CG Secretarist From: November 10, 1987 Date: A check of secretariat files reveals no copy of your c.v. We quite probably have one somewhere, but if so cannot lay hands on it. Could you send along a recent c.v. so that we may have one for referance? Thanks and regards, Curtis Farrar . 2 MAIL ICRISAT AR SU MESSAGE FOR CENTER DIRECTOR/CF Dr. Leslie D. Swindale, ICRISAT To: From: Curtis Farrar, CG Secretariat November 10, 1987 Date: A check of secretariat files reveals no copy of your c.v. We quite probably have one semewhere, but if so cannot lay hands on it. Could you send along a recent c.v. so that we may have one for referance? Thanks and regards, Curtis Ferrar ... MAIL ILRAD AR SU MESSAGE FOR CENTER DIRECTOR/CF To: Dr. A. Ross Gray, ILRAD From: Curtis Farrar, CC Secretariat November 10, 1987 Date: A check of secretariat files reveals no copy of your c.v. We quite probably have one somewhere, but if so cannot lay hands on it. Could you send along a recent c.v. so that we may have one for referance? Thanks and regards, Curtis Farrar .8 - ond c.c. Frone Hall

MAIL CGI101 AR SU Message for John Holden

Date: October 20, 1987 To: John Holden From: Selcuk Ozgediz

Good to hear from you. I called Trevor to ask him if he sees any need for a follow-up to the EMR in 1988 so that we can appropriately plan our work in the management area in the secretariat. This was prompted in part by Trevor's comment at the last IBPGR committee meeting in Montpellier that it might be good to do a small review in early 1988, after IBPGR has some experience with working under the conditions of the agreement. Also, I understand that earlier Mr. Walton had discussed with Curt the need for some form of evaluation early in 1988 in order to make sure that there was time to make alternative arrangements should it be decided that the operation was not working effectively under the new arrangements. My call to Trevor, therefore, was not for "selling" another review; it was for ascertaining IBPGR's needs for services from us in the management area in 1988.

g-12

If a follow-up review were undertaken, it would probably have to focus primarily on whether the agreement and its implementation has removed the key management constraints identified during the external review. The effectiveness of other management changes made by the IBPGR since the review could also be covered. A one- or two-person review would be called for depending on the scope of the exercise and the audiences.

We have put the matter on hold until the board meets in November. Perhaps we can discuss further when you are in Washington November 3-5. Regards. Selcuk.

cc: Trevor Williams, IBPGR Curtis Farrar, CGIAR secretariat

•s •end

## October 14, 1987

# Note to Mr. Farrar on Conversation with T. Williams

Trevor says he sees no need for any review/monitoring of the IBPGR's relationship with the FAO in the near future. He asked if anyone had requested that such a review be done and I replied that no one has (other than himself--in the IBPGR sub-committee meeting in Montpellier). The agreement between IBPGR and FAO expires at the end of 1988. The board will take up the issue of renewal at its next meeting in February. I suggested that the board may wish to address at that time if such a review is necessary and how it may be carried out.

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Thus, unless the Group or the Co-sponsors raise the issue of the need for monitoring, no action is called for on our part until after the IBPGR board meeting in February.

Selcuk

cc. DP, MC, DC

To: David Hopper From: Don Plucknett Through: Curt Farrar

Subject: Rural Advancement Fund International (RAFI) Criticism of IBPGR efforts to establish a Register of Genebanks holding base collections.

One of the tasks IBPGR has wanted to carry out is an evaluation of standards of germplasm collection and maintenance in its designated base collections. This is a somewhat sensitive matter, since these base collections are held mostly by national genebanks or by international centers that agree to a custodial role for the collections. Thus, in some ways, IBPGR is placed in the position of telling governments and organizations how to do their business and how to use their own resources. On the other hand, such evaluation is an essential and valid activity for IBPGR, to ensure the safe storage of collections for which others have assumed such a custodial role. Also, of course, some of the collections have been gathered under IBPGRfunded missions, and in some cases genebanks assuming a custodial role have received limited support from IBPGR.

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Agreements between IBPGR and institutions assuming long-term responsibility for base collections include the following provisions: the collection will be adequately funded and staffed and, if this is not possible, FAO/IBPGR will be notified immediately; stored materials will be made freely available to any qualified institution or person (such distribution is usually made by an associated medium-term genebank, since base collections are not to be disturbed for such routine exchange); IBPGR will have access to the collection and data at all reasonable times; the materials will be duplicated elsewhere, for safety; seeds will be stored following best scientific procedures; and samples will be regenerated when seed viability begins to decline or seed quality seems to be reduced critically.

In order to establish a Register of Genebanks, IBPGR invited its 37 designated base collections to participate in the register. Of those so designated, a number were visited in 1986 to assure that international standards were being met. Such visits have been continued in 1987. The genebanks are evaluated against agreed international standards and the results are reported to the Board. Should a genebank fail to meet standards, constructive suggestions are made to help improve standards and the situation will then be reassessed.

The first reports of such evaluations, those made in 1985, were presented to the Board in February 1986. Eighteen genebanks were evaluated in 1986. In its 1986 Annual Report, IBPGR reported that some genebanks meet all of the standards, but others are poorly managed or have unreliable or ineffective equipment. Several of the genebanks having deficiencies began immediately to upgrade their genebanks, while others are expected to follow shortly.

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The consultant report to the Board on the 1986 evaluations of genebanks (Progress on the development of the Register of Genebanks) was reviewed by IBPGR earlier this year. Somehow a copy of this report fell into the hands of the Rural Advancement Fund International (RAFI), a private group with headquarters in North Carolina and an active critic of IBPGR. Its two principal persons are Pat Roy Mooney, a Canadian agricultural economist who has written two books that are very critical of IBPGR and, to a lesser degree, the CGIAR, and Cary Fowler, an American gadfly/critic who has Mooney's become active in the agriculture counter-culture. books are "Seeds of the Earth" and "The Law of the Seed". These books have been important references for the countries and persons who pushed for an International Convention on Plant Germplasm Resource, and the push for which eventually led to the International Undertaking on Plant Genetic Resources and the formation of the FAO International Commmission on Plant Genetic Resources.

Mooney and Fowler publish a newsletter, RAFI Communique. They have dedicated their entire July issue to "A Report on The Security of the World's Major Gene Banks". This report is based entirely on an analysis of the restricted IBPGR consultant report on the 1986 evaluations of base collections. The RAFI article is highly critical of IBPGR and lists several major genebanks as "unacceptable", including two in Australia, and those in ICARDA, USA, Greece, Spain, and Canada. I have attached a copy of the RAFI Communique in case you should wish to read it.

IBPGR has responded to the RAFI criticisms, and has done so quite well, in my opinion. Their response is also attached.

This matter might come up on the floor at ICW87. IBPGR does not make a special presentation this year, but it could come up in the general business meeting. From: IRRI (CGI401) Delivered: Mon 12-Oct-87 6:24 EDT Sys 157 (28) Subject: MSSG TO FARRAR Mail Id: IPM-157-871012-057631195

FARRAR

A) IPBGR SUBMISSION ARRIVED BEFORE I LEFT. BEL CAN FIND THE COPIES ON MY CREDENZA.★

B) I SUGGEST THAT WE HANDLE THE CIP AND IBPGR COMMENTARIES IN AN INFORMAL FASHION I.E. NOT TRY AND INTEGRATE OUR SCIENCE/STRATEGY COMMENTS WITH THOSE PREPARED BY THE TAC SECRETARIAT. ONE PRINCIPAL REASON IS THAT BOTH CENTERS HAVE HAD A ROUND OF DISCUSSION WITH TAC IN JUNE.

C) IRRI DG SELECTION IS STILL COOKING AND A DECISION EXPECTED B' WEDNESDAY OR SO.

D) ICLARM VISIT WAS VERY USEFUL ALTHOUGH MY PARTICIPATION WAS LIMITED DUE TO LATE ARRIVAL.

R. TADVALKAR

CF/DP/ SO/ MC /MR / HD

\* Copies being given to so IMC. IBPER is sending additional copies by coursies. I will distribute to others upon receipt.

Consultative Group on International Agricultural Research



# International Board for Plant Genetic Resources

Headquarters Crop Genetic Resources Centre (AGPG) Plant Production and Protection Division Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy Cables: Foodagri Rome Telex: 610181 FAO I Telephone: 57971

To: The Chairman and members of TAC

DATE: 18 September 1987

. .

FROM: J.T. Williams, IBPGR Director

SUBJECT: IBPGR'S 5 year programme and budget submission

I have pleasure in enclosing a copy of the IBPGR's 5 year programme and budget submission.

This is accompanied by the draft Long-term Strategy Report. The first draft of this has been discussed by the Board of Trustees and will be finalized after the Programme Committee makes final revisions. Whereas I do not anticipate any major changes in emphasis, please regard this as a draft for the use of TAC only at this stage.

I look forward to our interaction at the upcoming TAC meeting.

cc: Gorelli Williams (chrono) AGP Reg (2) rn ld file

## **Consultative Group on International Agricultural Research**



# International Board for Plant Genetic Resources

Information copy: pr. D.L. Plucknett Headquarters Crop Genetic Resources Centre (AGPG) Plant Production and Protection Division Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy Cables: Foodagri Rome Telex: 610181 FAO I Telephone: 57971

1 4 DCT 1987

PR 3/11 IBPGR N. America

IN REPLY PLEASE QUOTE OUR REFERENCE AND DATE OF THE LETTER TO AVOID A DELAN N DELIVERY OF YOUR MESTENSE

Dear Dr. Schnell,

Many thanks for your letter of 30 July 1987. It was good to touch base again and I well remember our meeting in Hawaii. Congratulations on the new appointment.

First of all I need to clarify the role of IBPGR. Our role is to target strategic research so that the results can quickly be applied to the global network of activities and lead to the better management and use of germplasm. Hence we do not act in the normal way as a funding mechanism.

In the area of in vitro work our attack is on a broad front to provide technologies and to ascertain the best way to set up and manage in vitro genebanks (currently under test). More basic research on stability is also underway.

It seems to me that the components of the US NPGS should be in a position to identify the strategic research needed for their enhanced functioning and that then IBPGR and NPGS can discuss where we can collaborate or cooperate. This is logical so that an outside organization like IBPGR does not appear to be interfering in any way or side-tracking the priorities for support within the NPGS.

Therefore I suggest you take an early opportunity to discuss matters with Dr. Henry Shands, the national coordinator with whom we have a most effective working relationship. You will appreciate that we are in no position to discuss financial support unilaterally with any component of the NPGS unless for some reason or other we approach an institution which on the basis of expertise can do short, sharp strategic research according to our priorities.

With best personal regards.

Yours sincerely,

J.T. Liams Director

Dr. R.J. Schnell Horticulturist/Curator Subtropical Horticulture Research Station 13601 Old Cutler Road Miami FL 33158, USA

# NOT TO BE QUOTED

#### IBPGR Long-Term Strategy Plan

#### 1. BACKGROUND

In many ways, the axiom that for every action there is an equal and opposite reaction seems to apply to agriculture. During the green revolution, the development of high-yielding varieties of food plants brought great gains in the fight against world hunger. Crop productivity was raised to unheard of heights. Yet as farmers raced to replace traditional cultivars with the new "miracle" varieties, they were blindly discarding plants that had developed over generations of creative cultivation. Uniformity replaced diversity. Many of the traditional varieties that were able to resist disease and pests were lost forever.

This phenomenon of increasing uniformity has only accelerated the decline in the world's natural genetic diversity. Population growth, deforestation, and desertification, together with modern agriculture, have all but destroyed many of the natural centres of genetic diversity and hastened the extinction of many valuable genotypes.

Secure in the belief that the ancient centres of diversity would continue to endure, undisturbed, as they had for thousands of years, most people were slow to recognize the urgent need for genetic conservation. While a few perceptive scientists realized the toll that genetic erosion was taking on primitive forms of crop plants as early as the 1940s, it was not until the 1960s that plant breeders and other scientists began to understand how serious the situation had become. Responding to a newfound sense of urgency, technical meetings in the 1960s and 1970s recommended the establishment of a worldwide network of centres for the conservation of genetic resources.

n meeting of the Technical Advisory Committee (TAC) of the CGIAR was convened in 1972 to consider the possibility of creating such a network. The direct result was the establishment of IBPCR in 1974, as an autonomous centre in the CGIAR family. The FAO in Rome, Italy agreed to provide the Headquarters for the new centre.

The original function of IBPGR as defined by the CGIAR in 1973/74 was to promote and coordinate an international network for genetic resources centres to further the collection, conservation, documentation, evaluation and use of plant germplasm of important food crops and other economic species.

Based on the findings of the second external review of IBPGR's programme and management, and the recognition of a decade of successful international effort, the CGIAR slightly modified the original mandate in 1985, opening the way for increased scientific research.

#### 1.1 MANDATE

further The mandate of IBPGR is to the study, collection, preservation, documentation, evaluation and utilization of the genetic diversity of useful plants for the benefit of people throughout the world. IBPGR shall act as a catalyst both within and outside the CGIAR system in stimulating the action needed to sustain a viable network of institutions for the conservation of genetic resources of these plants.

#### 1.2 THE BASIS FOR THE MANDATE

The genetic resources of heterogenous crop plants contain genes that are potentially useful in farming. The heritable diversity present in cultivated varieties, primitive landraces, and their closely related weedy and wild relatives provide the building blocks for the creation of new food crops. In addition, the introduction of new genetic material, through breeding and genetic engineering, can create more versatile strains of familiar food plants.

Important qualities such as disease resistance and tolerance to stressful environmental conditions, can be used to improve commercial food crops.

From the very first, IBPGR's task was daunting. In the 1970s there were few properly organized genetic resources programmes and scientific priorities were defined in only the broadest terms. There were virtually no complete collections of cultivated and wild varieties of any major crop. Faced with these tremendous gaps and a loss in genetic variability that was reaching crisis proportions, IBPGR adopted a priority system for its crop collecting activities. The priorities reflect the importance of crops as staple foods or economically useful products and the threat in specific geographic areas. Because of the rate at which genetic erosion has advanced, IBPGR has mostly been concerned with endangered materials.

In its effort to mobilize world opinion as to the importance of genetic conservation, IBPGR drew on the best available scientific advice. IBPGR rapidly became a focal point for genetic resources work, with a remarkable catalytic effect on national and international programmes, including the CGIAR centres.

In the first decade of operation, IBPGR has gone some way towards establishing major germplasm collections of its designated priority crops. It has stimulated the establishment of national and international programmes, often providing additional training. It has supplied a mechanism for applying research to practice. At the same time, IBPGR recognizes the need for an evolution of its role. The initial terms of reference of the Board covered the whole area of plant genetic resources. For practical purposes, the Board has for the most part limited its activities to cereals and other major food crops (including food legumes, vegetables, fruits and some cash crops) and forages. This conservative approach matched the emphasis and philosophy of the donors to IBPGR and of FAO and the CCIAR.

#### 2. TARGET GROUPS AND COLLABORATORS

IBPGR seeks to act as a catalyst: by encouraging, coordinating and supporting the genetic resources programmes of existing agricultural research institutions, on a national, regional or international level.

IBPGR's approach to selecting an institution with which to contract for a specific project — be it collection, conservation, evaluation, documentation or training is in large part pragmatic, determined by the availability of institutional resources. The Board's activities are wide ranging, often initiated or undertaken through national programmes, regional or international centres, or individual scientists.

#### 2.1 NATIONAL PROGRAMMES

IBPGR concentrates its support for national programmes on those developing countries which recognize the crucial need for a genetic resources programme as an essential part of their crop improvement effort. These countries should also be in a position to allocate budgetary and personnel resources of their own to such a programme. In a number of countries, usually the smaller and poorer ones, the development priorities preclude any significant agricultural research activities, except of an adaptive character. Little or no importance is attached to the preservation of plant genetic materials. IBPGR does not try to stimulate comprehensive national programmes in countries such as these.

For each country included within its programme, IBPGR provides a package of assistance tailored to the country's individual requirements, the strength of the national programme, the expertise and physical facilities available within the country, the specific crops which are important in the area, and the work already accomplished.

#### 2.2 REGIONAL CENTRES

In recent years, IBPGR has been moving away from its "regional" approach. In addition, IBPGR has emphasized crops over the development of regional infrastructures, once a certain level of support has been reached. The Board's funds will continue to be directed primarily to meeting the needs of users for ready access to databases for a specific crop.

IBPGR recognizes therefore that it must look primarily to national programmes, rather than to regional institutions as the essential operational units, with the exception of regional centres set up with assured financing of all their costs for a long period of time by donor countries. Nevertheless, regional cooperation is often useful, for example, in stimulating national efforts; in obtaining agreement on arrangements for regional long-term storage of collections of some crops; in organizing regional training courses; in promoting cooperation among the scientists of the region; and in providing effective leadership for IBPGR-supported genetic resources activities within the region.

# 2.3 THE INTERNATIONAL AGRICULTURAL RESEARCH CENTRES (IARCS)

Among the most important collaborators with IBPGR are the IARCs which make up the CGIAR system. CGIAR in fact remains the only major international funding organization for crop genetic resources work. Since each IARC determines its own programme and policies, it is not feasible for IBPGR to work out a standardized formula for cooperation throughout the system. Instead IBPGR tailors its requests for cooperative action to conform to the requirements and practices of each centre. Such cooperative agreements have been made with CIAT, CIMMYT, CIP, ICARDA, ICRISAT, IITA, ILCA, IRRI and WARDA. They have proved to be immensely useful both to IBPGR and to the IARCs themselves.

According to its mandate, IBPGR should function as a catalyst within the CCIAR system. The TAC of the CCIAR is currently considering policy relating to genetic resources within the system. Several points are relevant here:

- genebanks of IARCs function in a service capacity to the breeding programmes of the IARC and its partners and is limited to one or several commodities. No genebank of an IARC is staffed or funded to do other than this;
- ii) IARCs have progressively become involved in activities for which IBPGR used to take responsibility. These activities, which are most welcome, relate to collection of materials, conservation and description;
- iii) IBPGR still largely has responsibility for basic research on the wild genepools of the commodity crops of the IARCs. IARCs could become more actively involved in the early stages of breeding using such materials (wide-crossing, pre-breeding) and assume full responsibilities in this area;
- vi) IBPGR is the only Centre which deals with the crops not covered by the mandates of the IARCs;
- v) strategic research is defined by IBPGR, as one of its central responsibilities. The involvement of other IARCs in this effort will depend on the freer availability of funding.

## 2.4 OTHER AGENCIES

IBPGR maintains direct links with all other international organizations which are involved with genetic resources, e.g. FAO (and its Commission), UNEP, IUCN/WWF, UNESCO, as well as ISTA, CSC and other scientific organizations. In many cases, IBPGR works with organizations involved with the genetic resources of plants other than crops. In particular, these organizations work in promoting awareness of the importance of genetic resources. At the moment, in all aspects of plant conservation, there are apparent

- major organizational shortcomings in many existing national, regional and some international conservation activities
- lack of continuity and assured funding for many programmes;
- lack of any major international finance for plant genetic resources
  work other than that mobilized through the CGIAR.

Over the next decade IBPGR will continually review its research agenda in the light of the availability of funds from other organizations and the uses to which they are put.

#### 3. PROGRAMME PRIORITIES

IBPCR's major goal is to provide expertise and support where necessary to institutions linked in a multi-faceted way through a global network to ensure the adequate collection, conservation, description and use of plant genetic resources. The Board's emphasis remains on crop germplasm interpreted broadly (and in accord with the conclusions of the second review of the CGIAR), and the wishes of donors to include the major staple food crops, some fruits and vegetables, forages and a limited number of industrial crops (as a result of their significance to the rural farmer).

In determining its activities, IBPCR is a strong position because it acts as the major global repository of information worldwide on all ongoing programmes, whether practical work in the field or related research. As a result it is readily able to identify gaps and to fill them itself or to encourage others to do so.

In setting its own research agenda, IBPGR divides its overall programme into two major areas:

1. <u>The Field Programme</u> is aimed at fostering the expansion and efficient functioning of the global network. IBPGR activities in the field range from the provision of advice and appropriate technology to training. The Field Programme is largely decentralized through the strategic placement of its staff around the world on the basis of identified priorities in particular areas.

2. The Strategy Research Programme is aimed at producing research results and better scientific knowledge which can be translated into practicable methodologies for transfer through the Field Programme, so that germplasm held by centres will indeed be secure and described and used to the best scientific standards.

#### 3.1 PRIORITIES AMONG PROGRAMME ACTIVITIES

After 13 years' experience of genetic resources work worldwide the priorities among programmes and subprogrammes of IBPGR are well established and can be quickly assessed from recent programme and budget presentations. In the next 10 years there will be continued shifts in emphasis between subprogrammes, under the guidance of the Programme Committee, so that IBPGR may capitalize on its comparative advantage to better serve its client countries and scientists.

The subprogrammes are generally compatible with the priorities accepted by the CGIAR in its review of the TAC activities in this area. Forward projections over the next decade assume very limited overall growth in core resources and a slightly higher projection of increase in special project resources, largely to meet urgent requests from client countries or to address particular topics which will provide more speedy technology transfer.

#### 3.2 STRATEGY OF PROGRAMME DEFINITION

The strategy adopted by IBPGR is based on the fact that many of the accessions of the primitive forms of crops and their wider genepools held in collections represent a valuable resource which must be securely conserved, well described, and documented and used by all who can thereby benefit mankind. In each aspect of the work, there is need for financial and manpower inputs on a scale far beyond the resources of IBPGR. Wherever possible IBPGR mobilizes resources, using its own limited resources for specific targets identified on the basis of knowledge of all other ongoing activities.

In this respect it is salient to record that the financial inputs world-wide have not increased in real terms since the early 1980s. Therefore it is crucial that IBPGR's limited resources are directed towards well-defined research and that such research is properly monitored and is cost-effective.

Strategy objectives which define the programme elements are shown in the scheme below:

#### FIELD PROGRAMME

Developmental activities backed by:

- \* security of germplasm through adequate conservation
- \* germplasm acquisition where there is genetic erosion, or selectively filling gaps in diversity
- germplasm description and use through data acquisition, analysis and evaluation
- managerial aspects such as facilitating flow of germplasm and data
- \* manpower development

technology transfer

# STRATEGIC RESEARCH PROGRAMME

Mission-oriented research aimed at providing:

- methods of conservation complementary to suitable scientific standards
- \* elucidation of patterns of diversity in the wider crop genepools and particularly in primitive cultivars
- \* facilitation of movement of germplasm through disease indexing and therapy
- \* enhanced use of germplasm by making collections readily available in an appropriately described form

The programme elements aimed at the above strategy objectives are itemized below. Descriptions include the relative emphasis given to the elements over time and the definition of new path-breaking research or emphasized efforts in particular areas.

The operational programme of IBPGR has several interrelated functions, outlined in the mandate, but these constitute an integrated package of responsibility. IBPGR's strategy is to link its operations to a vast network of resources and expertise in both developed and developing countries. The work encompasses the scientific and technical bases of plant genetic resources conservation and utilization extending from collection to use in the breeder's field. It remains an evolving and dynamic research agenda.

#### 4. IBPCR'S PROGRAMME

#### 4.1 THE GLOBAL GENETIC RESOURCES NETWORK

#### 4.1.1. Development activities

These include the creation of continuing awareness at the national level and the strengthening of the global network. To provide regular contacts with plant genetic resources activities in major areas of genetic diversity, IBPGR continues to station Field Officers in strategic locations. The network of Field Officers will slowly be expanded and, by 1990, will cover the following areas: Latin America, Europe/Southwest Asia/North Africa, West Africa (with emphasis on the Sahel), East and Southern Africa, South/Southeast Asia and China. The IBPGR considers these posts essential to implement its Field Programme and regularly reviews the need for Field Officers in specific areas of the world; if necessary it will reduce their number and/or shift Field Officers to different locations if the global network development would benefit from such changes.

The Field Officers are the IBPGR representatives in the developing world and are responsible for

- i) creation awareness of plant genetic resources at the national agricultural research centres, universities etc.;
- assistance in the organization of, and participation in workshops, training courses etc.;
- iii) participation in scientific work to strengthen national efforts, including hands on demonstrations, maintenance of IBPCR standards, monitoring of all genetic resources activities, monitoring of genetic erosion, information gathering and periodic assessment of activities;
- iv) establishment and maintenance of computerized data bases for plant genetic resources activities;
- v) liaison with International Centres of the CGIAR, bilaterally funded genetic resources projects and relevant non-governmental organizations e.g. WWF, IUCN;
- vi) provision of scientific evaluation of all project proposals submitted for IBPGR support; and
- vii) organization and participation in field surveys and collecting work.

Although much work has been done in the past to create awareness at the national level, this remains a continuing activity.

Coordination of the global network would be greatly facilitated if each country would formally appoint an IBPCR Liaison Officer, (who ideally would be the Chairperson of a national committee). Several such Liaison Officers have already been nominated, and the IBPCR is attempting to have such officers nominated in all countries with which it collaborates.

In relation to the global network it must be more widely recognized, that IBPGR is not a development agency, nor a grant-awarding body, but that its role is to stimulate the development of national programmes as part of its global network. Support to national programmes is largely based on the interest of the particular country in establishing or expanding its genetic resources activities, as well as on the wealth of plant germplasm available in that country. IBPGR seeks to link its work to parallel work of other organizations to ensure complementarity

#### 4.1.2 Base and active collections in genebanks

IBPGR's strategy in relation to conservation of germplasm in collections has three major components:

- i) Provision of technology through research;
- Monitoring of standards of management of collections and their improvement when necessary;
- iii) The construction of interacting networks of base and active collections;

The definition of satisfactory operating standards in genebanks is a research activity. What follows is a consideration of the role IBPGR sees for itself in the next decade in relation to ii) and iii) above.

#### 4.1.3 Types of conservation collections

There are a number of complementary methods of conservation viz:

Plant	Long-term	<u>Medium-term</u>	IBPGR	Standards
Material	Conservation	Conservation		
Seed	Base	Active	+	-}-
Vegetative		Field Genebank (active)		
Tissues (cells)	<u>In vitro</u> base genebank (none exist yet)	<u>In vitro</u> active genebank	(+)	being tested

With respect to conservation, IBPCR seeks to ensure that, for each major crop, there are several centres in the world, designated by the Board, which accept responsibility for holding collections of the particular crop under conditions assuring long-term viability. These are the "base" collections.

At present, only seeds which can be dried and cooled can be stored in collections. Clonally propagated crops have to be maintained in culture and will be held in base collections only under conditions of cryopreservation. Acceptable techniques for this have yet to be developed and are addressed as part of the research programme. Although seeds of some clonal materials (e.g. sugarcane, sweet potato, potato, grapevine) can be maintained in seed storage facilities, the samples do not regenerate the original clones.

IBPGR has already reached agreement with numerous genetic resources centres throughout the world to hold base collections of seed crops, including the major cereals, legumes vegetables and forages. Each centre holding a base collection agrees to make arrangements to monitor the viability of accessions at appropriate intervals and to regenerate them when necessary. Regeneration can be undertaken at the centre holding the base collection if the ecological conditions are right, or if not, arrangements must be made for regeneration elsewhere. The centre designated to hold the base collection is also required by IBPGR to document the collection so that the curator has a systematic inventory from which he can identify the essential genetic characteristics of the resources in the collection.

Some base collections are held by centres which also hold, under medium term storage conditions, "active" collections available for current use. These undertake regeneration and also the functions of evaluation and of such centres, of course, multiplication and distribution. In the documentation system must collate accessions, whether in long- or medium-term storage, and the results of evaluation must be included in the data base. Where the base collection is held separately from any active collection, IBPCR's strategy is for the base collection centre to enter into collaborative arrangements with one or more centres holding active collections of the crop to ensure that the functions of medium-term storage, regeneration, evaluation, multiplication and distribution are properly carried out. In the case of many, if not most crops held in base collections, these essential links have yet to be fully developed. The development of the conceptual framework for this part of the network is a major task for IBPCR on the immediate future.

For several major crops, duplicate base collections still need to be designated for safety and to receive a full complement of accessions. Earlier indications that about 50 base collections will form a reasonably complete network do not need to be revised. These will cater to about 40 crops or groups of crops and other genetic resources. By 1986 IBPGR had designated base collections for all seed crops to which it had assigned a first, second or third global priority. The Board expects that, by 1990, full duplication of all these collections will be completed and therefore support such work will be phased down.

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As a matter of policy, IBPGR support for storage facilities is limited to financing refrigeration and other equipment; the host government or institution is expected to provide the land and buildings. Moreover, before providing financing for any such equipment, IBPGR policy for <u>base collections</u> is to require the following commitments from the host government or institution:

- i) that the collection will continue to receive adequate operating funds and personnel and that if, at some future time, this is not possible, FAO/IBPGR will be alerted promptly;
- ii) that if the material stored is not available from an active collection, it will be made freely available from the base collection to any professionally qualified institution or individual seriously interested in using it;
- iii) that material will be accepted for storage on a global or regional basis;
  - iv) that appropriate arrangements will be made for regeneration of the material; and
  - v) that arrangements will be made to duplicate the material for safety.

For <u>active collections</u>, the same commitments will be required (without the proviso in sub-paragraph (ii)) and cover the following additional requirements:

- vi) that suitable links will be made with the base collections designated by the Board and that duplicates of the materials held in the active collection will be deposited in such base collections; and
- vii) that characterization and preliminary evaluation of the material will be carried out and that the resulting data will be provided to the curators of the base collections and will otherwise be made freely available along with the material.

Support to active collections is likely to expand substantially over the next decade.

#### 4.1.4 Storage of clonal crops

IBPGR began intensive work on the conservation of clonal crops in 1980. Crops which need attention include high priority root crops, fruits and some industrial/cash crops. IBPGR acted by, (i) commissioning specialist reports to assess the state of the arts on genetic conservation using <u>in vitro</u> techniques, (ii) identifying institutions working on related scientific projects, and (iii) convening an expert international committee. The latter has stressed that:

- there is the need for increased research and development efforts on techniques for genetic conservation of clonal crops, especially cryopreservation. IBPGR has commissioned such research;
- genetic conservation must involve down-stream checking, assessment of genetic stability and biochemical characterization. IBPGR has initiated strategic research on genetic stability;
- disease indexing is essential because genetic conservation of clonal crops is pointless without exchange and movement of materials.

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In addition, the report identified those clonal crops to which research priority should be accorded. Details are provided in a later section.

IBPGR has agreed to undertake the major coordinating role in this field and has made research and development on <u>in vitro</u> genetic conservation a major and urgent thrust of the programme. IBPGR has also seen that <u>in vitro</u> techniques, can provide novel and more efficient ways of collecting germplasm and IBPGR is vigorously pursuing these newer methods.

#### 4.1.5 Monitoring of standards of conservation

The monitoring of standards and the effectiveness of management of the conservation of germplasm is a sensitive issue which requires sensitivity as well as objectivity on the part of IBPGR. Curators and national authorities are sensitive to criticisms, particularly when standards are seriously lower than they ought to be. Nonetheless, IBPGR sees its role, at least in the medium-term, as the guardian of standards. In the longer-term, IBPGR will assess the effectiveness of this exercise and consider continuation of the activity or jointly pursuing it with others.

# 4.1.6 Size of conservation collections

In its last published Strategy Report (1984) IBPGR declared its policy of reducing support to speculative and <u>ad hoc</u> collecting in favour of purposive collecting to rescue material under serious threat of erosion, to fill gaps in the representation of diversity in existing collections, and to divert resources and attention to the collection of wild and weedy crop relatives. This decision was made on the basis of the numbers of accessions known to have been collected for all major crops during the first 10 years of IBPGR's operations.

Qualitative data are now needed on

- the extent of unplanned replication in collections;
- the degree of representation of the ecogeographic distribution range of the species;
- the viability of stored material assessment of erosion in genebanks.

IBPCR, on a crop by crop basis, intends over the next decade to obtain data and inform the world community on whether collections of cultivated material are, in fact, adequate.

This calls for continued desk-top research by Staff and interaction between collection data bases to permit the assessment of stored germplasm in relation to its adequacy, the need for further collecting, the need for generation and the extent of erosion in genebanks.

The long-term objective in conservation clearly should be the maximum representation of diversity in the minimum number of accessions, dispersed through the world collections, all committed to free exchange of germplasm and data, with duplications or replications being deliberate. IBPCR will organize its programme to these ends.

In this respect, the scale of the task of conservation, characterization and regeneration is so large that it seems essential that all genebanks and their national authorities regard themselves as part of an integrated and interacting network, if resources are not to be wasted and crop genetic resources effectively conserved. The very future of the global network depends on IBPGR's continued work in this area. It is a long-term effort and will extend beyond the next decade.

Energetic steps are required to push the activities from the quantitative to the qualitative stage and IBPGR must maintain responsibility in order to pursue its mandate

#### 4.1.7 Networks of collections

IBPGR strategy for the designation of dispersed crop base collections underlines the basic truth that they are but components of a world wide germplasm collection for a particular crop. Given the principle of free availability of material on the one hand, and the need to maximize the effective use of limited resources on the other, the principle of collaborative interaction in crop networks seems self evident and unchallengeable. In practice the implementation of this principle depends on the establishment of computerized information systems. These systems should provide data on the complementarity of the base collections and on their interaction with active collections. Experience shows that the accomplishment of this relatively limited objective is a formidable task for which IBPGR has to continue to provide support.

In terms of the network of active collections, yet to be designed, IBPGR intends to take a step-wise approach and may feel that substantial additional financial resources are necessary.

#### 4.2 GERMPLASM ACQUISITION

IBPGR's strategy is to collect and thereby rescue germplasm being threatened by genetic loss or erosion, and to fill gaps in existing collections. This applies to landraces, primitive cultivars, and to wild and weedy crop relatives, the latter especially in view of their enhanced use in breeding.

There will always be a need for additional collecting but IBPGR's emphasis will, over the next decade, be on selective collecting and better sampling — in crop centres — of diversity, based on information availablity of material to fill important "gaps" in existing genebank collections.

In order to identify gaps and fill them, a knowledge of the representation of genetic diversity in collections is necessary and this can only come through evaluation and documentation of those collections. Staff continually assess those collections and carry out analyses.

Knowledge of what remains in the field in centres of crop diversity requires assessment of genetic diversity within those centres and collecting strategies that will best sample that diversity, with emphasis on populations or biotypes not already represented in genebanks. Such a systematic approach is the only scientific way of identifying that stage when there are sufficient germplasm samples of a given crop. Numbers of samples alone cannot answer the question; indeed, it is dangerous to play with numbers in existing collections to assess how representative those collections are when we do not even know the extent of redundant duplication. In the case of collecting missions supported by the IBPGR, the following principles are applied:

- duplicates must be left in the host country;
- if the mission is not locally organized (the Board would prefer that it is), local scientists should be included in the collecting team to the extent possible;
- appropriate arrangements must be made in advance for conserving the materials collected;
- appropriate arrangements must be made for orderly collection records, using agreed standard descriptors;
- appropriate arrangements must also be made for characterization and preliminary evaluation of materials, again using agreed standard descriptors; and
- the sponsors must agree to free exchange of materials and information.

In planning its programme, IBPCR follows two complementary approaches in fashioning its programme of support for collecting missions. For each priority crop, it receives information concerning the accessions held in existing collections, the priority regions for exploration, and the institutions involved. For this information, IBPCR obtains the best opinions of the scientific community. The second approach is a geographic one, emphasizing collecting in the areas of serious genetic erosion.

#### 4.2.1 Genetic erosion

From 1987, IBPGR has instigated a mechanism whereby its Field Staff may record development changes and others that may lead to genetic erosion. In this way, timely targets can be set for salvage operations.

## 4.2.3 Distribution of materials

The IBPGR has always advocated the principle of free availability of genetic resources and has made it a condition of support to national collecting missions. The concept of an international crop germplasm collection, dispersed in national collections collaborating in a network of active and base collections, has an implicit and necessary condition that exchange of material will be possible. A network designed to maximize use of resources will be one where much of the material in each active collection will be unique.

Given that the network is necessary, quarantine barriers are likely to play a central role in the exchange of material and hence the effectiveness of the network. As a first step in assessing the likelihood of this prediction and its significance, information has to be assembled, country by country, crop by crop on the pathogens and their tolerance levels which are defined in quarantine regulations. Furthermore, the capacity of national quarantine systems to cope with numbers of accessions/crop/annum needs to be determined. These points lead to the conclusion that computer data bases in association with FAO on quarantine regulations for each major crop, are essential to the construction of crop networks and to establish in practise, whether the idea of free exchange within a network is feasible.

These aspects of germplasm distribution will receive major attention 1988-93 and monitoring of progress will assess the role of IBPGR in the longer-term.

Past experience has also shown that numerous national programmes in the poorer countries cannot easily dry, package and distribute widely collected materials. To meet this need, IBPGR has established a Seed Handling Unit for Africa and adjacent areas and in the medium term this will be expanded to include one in Asia and another in Latin America. In the longer-term IBPGR's strategy will be to phase these out as national programmes become stronger.

#### 4.3. GERMPLASM CHARACTERIZATION AND EVALUATION

For accessions in any collection to be of maximum value to breeders, as much information as possible must be available concerning the samples and their genetic characteristics. Some of this information consists simply of information recorded at the time of collection, i.e., identification of the accession and of the location where it was collected, the ecological conditions at the location, and any names or accession numbers which have been given to the accession by the collectors or curators. Such information is commonly called "passport data". The passport data must be supplemented by information obtained through characterization and preliminary evaluation of the samples, with the data resulting therefrom recorded in reasonably standard form.

The function of <u>characterization</u>, as defined by IBPGR, is the recording of characters with a high degree of heritability which is apparent even when plants are grown in different environments. Characterization data provide the means for classification of germplasm, for studying patterns of variability and are also invaluable during regeneration of stocks.

<u>Evaluation</u> refers to scoring of characters, the expression of which is influenced to a large extent by environment. Evaluation results may vary widely from site to site depending both on the genotype and the trait in question. Out of virtually an open-ended list of descriptors, the IBPGR recognizes the category of <u>preliminary evaluation</u>, consisting of a limited number of easy-to-score traits which are considered desirable by a consensus of users of the particular crop.

In order for the information resulting from characterization and evaluation to be recorded in reasonably standard form, IBPCR has organized and assisted in the formulation, for each crop, of internationally agreed lists of descriptors and descriptor states (hereinafter referred to collectively as descriptor lists). Descriptor lists have already been approved and published by the Board for 60 crops or groups of crops, and work will continue on the formulation of similar descriptor lists for others. Additionally, experience gained during documenting the collections frequently justify the revision of published lists and, in the longer-term, the incorporation of gene symbols - a mechanism which will enable molecular biolgists to access and use germplasm collections. IBPCR's strategy for characterization and evaluation focuses on 3 areas:

#### 4.3.1 Data acquisition

With the extensive build-up of collections in the past, backlogs of samples have accumulated in collections with limited information about their genetic characteristics. IBPGR will accelerate data capture through cooperation with national and international organizations. In most cases, especially for national programmes, IBPGR support is required, whereas work at the International Agricultural Research Centres is clearly the responsibility of the respective centres.

In addition to providing encouragement and support to individual collections in the acquisition of detailed and reliable data and in the organization of their data systems, IBPGR will continue to support various activities aimed to widely disseminate the information about and the use of accessions. In the forefront of this service is publication of directories of germplasm collections, which since 1985 have been prepared in a new format and provide information on the type of samples held in each centre, their geographical representation, maintenance procedures, availability of samples, characterization and evaluation, method of documentation, etc. The directories serve as a ready reference for breeders and scientists involved with genetic resources work to identify collections where material and/or further information can be obtained.

#### 4.3.2 Data analysis and application

The assembling and ordering of passport data on existing collections, the filling of gaps in the data for significant collections (by reference to geographical and climatic data bases), the analysis of characterization and evaluation data and the facilitation of the flow of such information among scientists and germplasm centres are the major areas of emphasis. The impact on future planning of work as well as on availability of information about samples is expected to be derived from centralized data bases on specific crops. The development of such systems has been accelerating since 1982-83 with the objective to compile comprehensive information from major collections in the network. Centralization of these data will allow the assessment of the current status of preservation and characterization of genetic resources, the study of genetic variability present in collections, the identification of gaps, the selection of material possessing specific attributes, etc. In order to ensure a high standard, the systems need to be located in internationally recognized centres of excellence, preferably in major base collections. [Additionally, as experience from the ECP/GR special project shows, the development of a crop data base should be preferably guided and monitored by a small working group or committee of experts].

IBPGR sees its role as 'pump-priming' to start the work on crop data bases. However, the continuous support for maintenance and updating of data bases must be left to other, mostly national institutions. The centralization and computerization of information on specific aspects of genetic resources activities like collecting, conservation, genetic erosion, etc. is another area of work the Board has entered with confidence. The respective data bases will provide a good planning and managerial tool. A number of such subject-related, data bases are already established, e.g. for:

- on-going <u>in vitro</u> research pertinent to plant genetic conservation (see section above);
- ii) germplasm collected with IBPGR-supported missions;
- iii) all on going IBPGR projects.

The work on other systems, specifically for mapping the geographical distribution of wild relatives of crops will receive high priority in the years to come. The IBPGR views the development of these systems as primarily the responsibility of its Staff.

#### 4.3.2 Evaluation strategy

Greater utilization of germplasm collections by breeders requires adequate methods of selecting samples for breeding programmes. Original concepts of collating all evaluation data in large data bases are neither practicable nor scientifically sound. New approaches are required and the IBPGR, following the recommendation of the last External Review that it should become more involved in evaluation, seeks cost-effective strategies for evaluating genetic variation in collections. Several related issues such as:

- establishment of 'core' (or subsets) within large germplasm collections based on ecogeographical principles;
- applicability of molecular techniques for the conservation and the fullest utilization of plant genetic resources;
- iii) transfer of genes from wild or primitive genepools to elite cultivated backgrounds;
  - iv) collaboration between public and private breeders, other scientists and curators in evaluation of germplasm collection, particularly in areas of germplasm enhancement.

The elaboration and testing of new concepts will be a major task of the Board in the next years and practical implementation will be phased in when feasible.

#### 4.4 TRAINING

As a result of the multi-faceted growth of the IBPGR-promoted global network of scientific institutions engaged in germplasm work, IBPGR's training programme continues to face challenges.

In the future, not only will it have to help provide essential technical skills through traditional educational courses to national programme scientists to sustain development of its network, but it will also have to respond in a variety of innovative ways and the results of IBPGR research will make its impact on germplasm operations and utilization.

Experience accumulated over the past decade shows that the transfer of technology is greatly facilitated when training is provided in the trainee's mother tongue. Thus, the programme expects to target a greater number of such courses, and a start has been made using English, Spanish, Arabic Chinese and French. In addition, courses will be increasingly distributed over greater parts of the world using the comparative advantages of advanced national institutes.

The IBPGR strategy includes training for one-year (M.Sc. or equivalent degree) and for courses of less than 12 months (short-technical courses), individual programmes, e.g. study-tours and intern fellowships (the latter in association with IBPGR research programme). The programme is designed to cater for the manpower needs of national programmes for technicians, researchers and managers.

As germplasm work becomes more established at the national level and international centres strengthen their activities, topics dealt with by the training programme will become more specialized. New modules and audio visual aids as a means for instruction in genebank management offer an innovative, efficient and cheap way of transferring skills and knowledge. New techniques, e.g. in vitro collecting methods, can only be field tested through suitably-designed training programmes. In this way, training will help in the development of IBPGR's research programme itself.

Training manuals for specific germplasm operations continue to be needed for development of the network, e.g. manuals/guidelines for handling of specific types of germplasm.

Over the 10 year period IBPGR will increase its Staff support to these activities by the addition of an assistant training officer.

#### 4.5 IN VITRO CULTURE RESEARCH

A large part of the world's germplasm is currently maintained as breeders' collections in plantations, orchards or in so called evolution gardens. IBPGR calls such collections 'field genebanks'. Many of these are historical holdings, which in the past were used for development and improvement of root crops and plantation crops in the tropics or, for instance, for breeding of temperate fruits. The crops range from those which are grown from seed, such as rubber and coconut, to those which are vegetatively propagated such as citrus, cacao (in some cases), banana and many other fruits. From the point of view of genetic conservation, these field genebanks are, in most cases, totally unrepresentative of the range of genetic variability within the respective crop genepool and most of them do not constitute more than a fraction of the variability which should be conserved for the future.

When IBPGR started its field programme it perforce laid initial stress on seed crops such as the cereals and food legumes; later it moved to include fruits, vegetables and forages. Any strategy for collection and conservation of samples of crops that are normally propagated vegetatively, or that produce seeds which cannot be stored using normal procedures of seed drying and maintenance at low temperatures, as used in seed genebanks, obviously had to include a consideration of <u>in vitro</u> techniques. Problems of <u>in vitro</u> storage of such material, when solved, should also relate to cycling of the material through multiplication schemes, distribution of germplasm and also its characterization and evaluation. Hence the development of the full potential of <u>in vitro</u> culture storage and associated biochemical techniques is necessary in the handling of germplasm that, for various reasons, is considered difficult to conserve.

Over the next 10 years IBPGR will increase its support to in vitro culture research.

#### 4.5.1 Collection and tissue culture technology

IBPGR is committed to the development and implementation of <u>in vitro</u> collecting techniques for a range of explants. A beneficial spin-off from the <u>in vitro</u> collecting research is the development of a modified policy for collecting, characterization and the surveying of genetic diversity in the field. A combination of various technological developments should permit accurate preliminary surveying of collecting sites in remote areas, particularly when genepools of long-lived perennials are involved. Preliminary surveying can be followed up by targets to collect in 'hot-spots' of genetic diversity.

In the development of tissue culture technology, IBPGR's strategy is guided by the availability of a number of complementary conservation techniques based on seed, the whole plant (in situ or ex situ), or in vitro culture. In the main, in vitro methods will be adjuncts to other methods of conservation rather than the sole method of conservation. In vitro methods should not be viewed as attractive biotechnological alternatives where more conventional approaches are adequate.

With respect to <u>in vitro</u> genebanks, two are recognized: (i) the <u>in vitro</u> active genebank (IVAG) where cultures are maintained under slow growth; few exist at the moment; (ii) the <u>in vitro</u> base genebank (IVBC) where cultures are maintained under conditions of cryopreservation; no IVBGs exist yet.

IVAGs and IVBGs parallel the active and base seed genebanks. They will link with breeders' working collections, which are outside the scheme of representative genetic conservation; they will also link with the field genebanks.

In order to establish true genetic conservation, research is necessary on in vitro culture methodology itself. Then cultures of representative diversity need to be organized into a genebank. The design aspects and the tentative standards for an IVAC, based on existing scientific knowledge, were finalized in 1985; in 1986 IBPGR established (in collaboration with CIAT) a working facility to generate data and to test, confirm and reissue standards

The IVAG requires subculturing cycles of the material which has been accessed, inoculated into culture and multiplied. For example, an accession represented in the IVAG by five original cultures each replicated five times, will be maintained under conditions of slow growth and subcultured approximately every two years by a five-fold division.

At the end of, say, four years, 25 representative cultures would be identified from the total of 625 for continuation into a second four-year cycle. As there is evidence that cultures can generate mutants that might thrive under the stresses imposed by the slow growth conditions, extensive monitoring of large numbers of the replicate cultures by biochemical or molecular techniques would be necessary to ensure that there is no unconscious selection for variants. Additionally, family lines need to be followed through the subculturing and strict stock control maintained in concert with monitoring. IBPCR's strategy in the long-term will be to assess the results from the research on collection and tissue culture technology and continue to pursue a programme aimed at specific important crops so that transfer of technology to the Field Programme is facilitated. In parallel, the results from the pilot IVnC will be assessed and after due modifications results transferred to centres.

#### 4.5.2 Cryopreservation

Ultimately for <u>base</u> storage, cryopreservation is necessary and a great deal of research is required to develop suitable techniques. The establishment of IVBGs lies further into the future and will depend upon satisfactory progress in the development of cryopreservation procedures. Maintenance and monitoring routines will differ from those in the IVAG; material will be subcultured in one cycle upon entry into the IVBG then frozen and stored in LN. No further multiplication cycles will be involved and monitoring will largely be to confirm the physical stability of the storage conditions. IBPGR will continue to support such research and keep abreast of all ongoing scientific work in this area through its international database on in vitro conservation and the establishment in the medium-term of a pilot IVBG.

#### 4.5.3 Genetic stability

In genetic conservation a central principle is that materials retrieved should represent the materials accessed. Accordingly the use of <u>in vitro</u> systems has been queried because of the release of somaclonal variation (hence the emphasis, above, on adequate monitoring in the IVAG). An IBPGR report, in 1984, summarized all existing scientific information and showed that the risk of genetic instability can range from minimal to considerable depending upon several factors including the culture systems used. IBPGR has to accelerate research in this area so that the causes of variation in culture may be elucidated, storage protocols modified and the levels of acceptable instability be circumscribed for each crop which will enter either IVAGs or IVBGs. Contracts were initiated in 1986 in laboratories with suitable expertise and a range of techniques, biochemical, molecular and genetic techniques, will be used.

Stability is a most interesting area of scientific research. There is evidence of the ubiquity of some instability in biological systems, even in stored seeds and vegetatively propagated materials. This whole area of investigation, in which IBPCR is expected to precipitate rapid gains in the knowledge bases, is an exciting one because of recent advances in molecular biology and the emergence of new approaches to germplasm utilization and crop improvement. It will need to be kept under close review in the longer-term.

#### 4.5.4 Disease indexing

The identification of specific disease-causing organisms, especially viruses and viroids in tissues of vegetatively propagated species, and the subsequent cleaning-up of stocks (which largely rely on <u>in vitro</u> culture combined with thermotherapy) are essential for the rapid exchange and distribution of crop germplasm. IBPGR has stressed to its collaborators worldwide the need for this type of work and appropriate techniques are built into the <u>in vitro</u> genebank design. Further strategies will be identified in 1987. Research will be initiated thereafter and it is expected that much of this will extend into the longer-term.
## 4.5.5 Planning of research

IBPGR maintains and continually updates a computerized database on information related to all aspects of <u>in vitro</u> conservation and associated areas of research, e.g. on propagation and disease indexing. The database includes data on 28 key crops or groups of crops (along with information on over 300 genera), with the facility to retrieve data in any one or a combination of 16 fields of information; searches are free to all <u>bona fide</u> enquirers.

The significant point of the database is that it includes a very large amount of unpublished facts and figures culled from scientists working in over 70 countries throughout the world. It represents a major strategy of IBPGR in maintaining scientific leadership in this area.

## 4.6 GENETIC DIVERSITY RESEARCH

Since IBPGR has taken major responsibility for crop relatives in order for the collections to be more representative a much deeper understanding of the origin, evolution and variation patterns within crop genepools is necessary. Experience of the IBPCR has shown that, except in a few cases, the knowledge base is inadequate and strategic research is necessary, on the one hand to carry out cost effective surveying and collecting and on the other to remove an <u>ad hoc</u> element is the wide crossing programmes.

Emphasis is placed by IBPCR on research to:

- map species using a range of evidence from published work, herbarium surveys and field surveys (most available information is over-simplified and often useless in the field);
- ii) carry out in specific cases systematic surveys on an ecogeographic basis, followed by specific exploration missions using data gathered in the initial phases. The following points are relevant. Firstly, the ecogeographic concept transcends national and political boundaries. However, despite this, it could serve national and regional needs in a better and more scientific and systematic manner than hitherto. Secondly, individual crop collectors generally concern themselves with cultivars and pay less attention, if any, to soil, climate and other ecological aspects of the areas in which the collections are made; this precludes an understanding of ecological background and its potential value in the utilization of the collections in countries and groups of countries around the world on the principle of agro-climatic analogies. Thirdly, collections made on an ecogeographic basis are more likely than collections made on any other basis to gather genetic diversity which is more relevant and important to practical crop improvement research. Fourthly, collections made on an ecogeographic basis are likely to lead to related wild species which collection missions emphasizing cultivars often tend to ignore;
- iii) analyse patterns and ranges of variation within and between populations using techniques such as isozyme analysis, DNA and RFLP analyses;
  - iv) understand species relationships and identities in genepools in relation to "biological species" and to identify different parts of the genepools for specific action. In some cases research relates to the primary genepool only e.g. in pearl millet, but where breeding has had a very long history, research relates to the secondary and tertiary genepools (in this case, the whole tribe Triticeae is relevant to breeding of wheat and barley).

There has been a marked tendency in recent years for research on taxonomy and species relationships not to attract funding; yet those of priority crops of the CCIAR and the IBPCR deserve support so that strategic research can be applied to collection, conservation and use. Much of the research is long-term and inter-disciplinary and IBPCR proposed to increase its support where necessary using special project funding.

## 4.7 SEED CONSERVATION RESEARCH

The overall aim of this research is to establish and implement standards in seed storage that will ensure maintenance of viability and genetic integrity.

The physiological basis of seed storage is still poorly understood. Many seeds maintain viability for extended periods when dried and stored at low temperatures. However, for a number of important crops, such as rubber and cacao, this does not work since they are 'recalcitrant', nor are there alternative storage conditions to prolong seed viability.

For germplasm conservation, genetic integrity has to be preserved. However, the frequencies of genetic changes in seed during storage is very largely unknown and the genetic changes imposed by regeneration cycles is still undetermined.

The above examples are only a few of the areas where major research gaps exist.

Initially, research supported by IBPGR was limited and primarily restricted to work on seed physiology related to storage and handling. The new medium-term strategy for the seed conservation research programme is to widen the support in strategic research in the following areas

#### 4.7.1 Physiology of stored seed

To promote research on seed physiology in order to develop improved methods of seed storage, research is pursued in the following:

Understanding the physiology of recalcitrant seeds: the reasons for seed/embryo deterioration and embryo desiccation and chilling injury remain mostly unknown. A better understanding of the above phenomena will help to develop better conservation methods for recalcitrant seeds.

- Embryo storage for recalcitrant seeds: in view of the large seed size of most recalcitrant seeds and the difficulty in lowering seed moisture contents in embryos of intact recalcitrant seeds, embryo storage research is strategically important.
- Low cost long term storage: by lowering the seed moisture content to a very low level (less than 3%), seeds could have a similar life at room temperature compared to those stored at -20°C with 7% seed moisture content. Some seeds with long storage life, e.g. wheat and barley, should be able to be stored at room temperature for more than 100 years with no need for regeneration if the seeds have been handled properly prior to storage. However, more research will be needed to investigate the low moisture effects on genetic integrity and to identify the long-life seeds. Liquid nitrogen seed storage shows promise for some small seeds (with some problems on hard seed, and mutation) but additional research is needed.

Non-destructive viability monitoring test: conventional germination test for monitoring viability consumes a large number of seeds. Developing a non-destructive viability monitoring test could be valuable.

#### 4.7.2 Genetic stability

To determine the causes and frequencies of genetic change in seeds during storage, research is implemented using more sensitive techniques including molecular biological technique, e.g. izoenzymes, and DNA probes to investigate the causes and frequencies of genetical changes. So far, research data on genetic stability of stored seed is very limited, and mostly based on observation of chromosomal aberration and some phenotypic mutations.

## 4.7.3 Dormancy

The occurrence, nature and methods of breaking of seed dormancy, need to be studied as an aid to improved genebank management.

#### 4.7.4 Regeneration and genetic integrity

The effects of seed regeneration on genetic integrity vary greatly depending on the kind of crop and the type of pollination. This whole topic is very complicated scientifically and of intense practical application. IBPGR's strategy is to analyze the existing scientific information and to undertake follow up research.

#### 4.7.5 Non-destructive disease indexing

IBPCR is attempting to develop methods of assessing the presence or absence of disease organisms in small seed samples without destroying the seed, since some accessions may contain very few seeds but are too valuable to be exhausted by traditional disease testing.

In the long term it is expected that the programme will not expand but shifts in emphasis will move from phsysiology to genetic stability and non-destructive testing. As from 1988 a major subprogramme will be developed on regeneration and in view of the number of species to be dealt with, an additional staff appointment will be necessary.

## 5. ORGANIZATION OF IBPGR

IBPGR is organized by function, listed above as programme and sub-programme elements. Two additional programmes: Administration and Technical Services provide a Headquarters back-up to the Field and Research Programmes. They include the Office of the Director and operations which service the Board of Trustees.

International Staff serve the Programme and these are budgeted against functions as Scientist Man Years. IBPCR regards its total staff complement (25 in 1987 expanding to only 31 by 1992-3) as the essential minimum to maintain scientific leadership. Similarly budget proposals over the next decade are unlikely to show marked increases since the strategy of the Board is to maintain a tightly knit team which maintains overviews of all relevant work and can speedily contract to the most suitable centres.

It is furthermore the strategy of IBPGR that it exercises no controlling function in its coordinating activities but continues to be an effective mechanism to interpret and carry out its mandate.

IBPCR realizes that genetic resources activities are in a sense to be conducted "in perpetuity". Long-term support will be needed for the multi-faceted network and the Board pledges itself to fully support the priority accorded to this work by CGIAR. IBPGR FIVE-YEAR PROGRAMME AND BUDGET SUBMISSION

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#### 1. Mandate and General Programme

The basic purpose in establishing the International Board for Plant Genetic Resources (IBPCR) was to try to ensure that future generations of plant breeders would still have available the wealth of genetic resources available today to use in their breeding programmes. To achieve that, the mandate especially states that IBPGR should further "the study, collection, preservation, documentation, and evaluation and utilization of genetic diversity of useful plants for the benefit of people throughout the world". The IBPGR is charged to act as a "catalyst both within and outside the CGIAR system in stimulating the action needed to sustain a viable network of institutions for the conservation of genetic resources of these plants".

From its foundation, IBPGR was conceived as a relatively small international organization acting in a leadership capacity and performing an essential catalyst role in encouraging and coordinating the scientific efforts of others in the field of genetic conservation. It was to establish and lead a network of linked institutions and scientists in a coordinated programme, supplementing on a highly selective basis the efforts of others through its own activities.

This involved among other things

- defining crop and institutional priorities
- assessing the state of technology to perform all tasks from collection in the field to use by scientists
- setting out action programmes for various elements of the network
- coordinating and advising on such action programmes in the course of implementation
- initiating specific actions on its own through a whole range of funding and support mechanisms as well as through simple persuasion
- directing efforts at strategic research to ensure that appropriate methodologies are available
- serving as a world clearing house to which individual institutions and scientists could look for full and complete information on the current state of activities thereby identifying efforts needed.

Over its 13 year history, IBPCR can point to a number of very significant achievements:

- the development of a vastly increased international awareness of the problem of genetic erosion and the need for genetic conservation
- the development of a global network of genebanks (increased from 5 or 6 adequate "seed stores" in 1974 to over 50 genebanks today) to preserve genetic materials. Specifically IBPGR has provided critical material and technical support to genebanks in developing countries
- the stimulation of other institutions on the national, regional and international levels to take responsibility for collecting, storing and describing genetic resources. These now span over 100 countries and cover a diversity of centres ranging from sophisticated CGIAR international centres to newly-established national programmes in some of the world's poorest countries

- the mobilization of significant parts of the world scientific community in advising, planning, and conducting plant genetic resources activities
- the establishment of collection priorities for all major crops genepools and in relation to geographical distribution
- the training of more than 1,300 individuals for genetic conservation work
- the organization and support of hundreds of collecting missions for genetic material
- the publication and dissemination of definitive scientific reports and studies; genebank directories and newsletters.

Although very significant progress has been made much more remains to be done. While governments and some important segments of the agricultural and scientific communities are now aware of the need for plant genetic resources conservation, many national genebanks are not financially self-sustaining. Quality control of genebanks is necessary to improve standards, management must be improved, data more effectively gathered and disseminated, additional material collected, and the gap must be bridged between genetic conservation collections and breeding. Most importantly there is an inadequate knowledge base for genetic resources work requiring new research to meet new and emerging problems. While IBPCR will continue to rely on and support outside research efforts, it is also developing "as a world centre of intellectual leadership in genetic resources" a small in-house inter-disciplinary research capability staffed with a limited number of senior scientists in such fields as crop diversity and population biology, seed physiology, tissue culture and plant pathology. The purpose of this effort is to fill essential research gaps being ignored by others, gaps which if left unfilled would impede the efficiency of the global network of centres conserving and using germplasm.

The IBPGR thus serves as both the director and one actor among many in the play to preserve the world's rich biological heritage.

#### 2. Basic Programme Structure

The IBPGR programme, for managerial and budgetary purposes, is organized into 9 elements comprising the operational aspects of the programme (e.g. specific research categories), overall institutional objectives (e.g. building the global genetic resources network) and administrative components (e.g. technical services and administration) necessary to support all of the operational elements of the programme inlcuding training. Because the elements of the programme are so interlinked and mutually interdependent, a given contract, or other implementation mechanism executed by IBPGR may and usually does support several of the programme components.

The programme is structured in the following components:

1. <u>Administration</u> — overall administration of all IBPGR activities including the operations of the Board of Trustees, its Committees, the Office of the Director, Personnel, and Finance.

2. <u>Technical Services</u> the provision of technical support and information to the Board, its Staff and the scientific community; and to publicise IBPGR activities. This includes technical and scientific committees, information and editorial services, and the maintenance of the library.

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3. <u>Global Genetic Resources Network</u> a central activity of the Board, the development of the genetic resource centres at various levels of the network. This category includes developmental activities with the centres such as the establishment of base collections in genebanks, the fostering of active collections, and the management and transfer of data throughout the network.

4. <u>Germplasm Acquisition</u> — the effort to rescue germplasm being threatened by loss and to fill gaps in existing collections so that they are more representative. This includes the monitoring of the extent of genetic erosion, the collection of endangered germplasm, the supplementary collecting activities to fill diversity gaps, and the facilitation of germplasm distribution.

5. <u>Germplasm Characterization and Evaluation</u> – the development of standardized procedures to process, store and distribute data and information related to characterization and evaluation of germplasm. This programme is subdivided into data acquisition, data analysis and application, and evaluation strategy.

5. <u>Training</u> - the effort to develop conceptual, technical and management skills through manpower training. This is composed of post-graduate training, specialized short technical courses, individualized training programmes, and intern fellowships.

7. <u>In Vitro Culture Research</u> the effort to develop <u>in vitro</u> techniques for the collection, conservation and exchange of genotypes of specific crops for which conventional seed storage methods are difficult. This component includes: collection and tissue culture technology, disease indexing and therapy, cryopreservation, genetic stability, and a pilot study for <u>in vitro</u> genebanks.

8. <u>Genetic Diversity Research</u> - the effort to better understand the origin, evolution, and variation patterns of crop genepools. This includes species mapping, ecogeographic studies, development of biochemical methods of description and research on wild relatives in priority crop genepools.

9. <u>Seed Conservation Research</u> - the effort to establish and implement standards in seed storage that will ensure maintenance of viability and genetic integrity. This programme includes study of physiology of stored seed, genetic stability, dormancy, regeneration and genetic integrity and non-destructive disease indexing.

The programme of IBPGR is based on the premise that if the considerable work on collection and conservation of germplasm carried out thus far is not to be put in jeopardy, specific research efforts to ensure satisfactory scientific standards and adequate use of the materials are necessary paralled by extensive training at the national centre level.

## 2.1 Research Strategy

In the first decade of its existence strategic research was secondary to the primary tasks of IBPCR: establishing major germplasm collections of its agreed priority crops; promoting the establishment of conservation facilities; and generally encouraging the range of institutional linkages and skills necessary to a functional network. These emergency operations were given highest priority due to the widespread and increasing threat to the continued existence of primitive germplasm. Since the early 1980's, IBPGR's role in research has been greatly expanded in full agreement with the findings of external reviews and recommendations of CGIAR. Rising from about 15% of the Board's budget in 1980, strategic research is expected to account for about 35% of the budget in 1988 and will level off to about 40% by 1992.

All of IBPGR's research activities are based on the following premises:

- a) that primitive germplasm is being lost in all crop genepools and in all traditional areas of diversity due to modernization of agriculture and that extensive appropriate research is necessary
- b) that wild species related to crops are of wider utility than is generally appreciated at present and they are under threat due to land use changes and research on their conservation is essential
- c) that conservation or representative variability is necessary for future breeding and scientific needs and research is required to determine the most effective conservation methods.

At present the strategic research effort is concentrated in 3 areas:  $\underline{in}$  <u>vitro</u> culture research, genetic diversity research, and seed conservation research.

In implementing its research programme IBPGR has established procedures, through which the initiation, monitoring, dissemination and evaluation of research activities are carried out. Proposed projects are identified annually by staff and institutions following intensive discussions with the scientific community. These are matched against agreed-IBPGR priorities and a review is then made of institutions already involved in similar or related research. Contracts are then agreed or the research is carried out in-house if possible and during the course of the research progress is monitored by staff and/or members of specialist committees. In parallel, the Board's Programme Committee monitors programme activities at regular intervals. Such evaluation usually leads to the identification of follow-on research or the implementation of new methodologies or standards by the centres as part of their own programmes. Dissemination of results may be through an IBPGR

#### 3.1 Agenda in the Medium-Term and Output Expectations

By 1992, IBPCR will have established and helped foster a viable network of centres to conserve representative genetic material of the major crop species (cereals, food legumes, vegetables, fruits, forages, and some important industrial crops). The significant improvement in methodology related to seed conservation which is resulting from ongoing research is expected to enable the development of an adequate number of high-quality seed genebanks in the network by 1992 for most of the major crops. In addition, the development <u>in vitro</u> genebanks will have been initiated to cover species for which seed storage is not practicable e.g. those which are vegetatively propagated.

The network of centres to which these genebanks are related will comprise a much needed conservation network comprising two types of collections: i) the long-term security of samples in "base collections" and ii) the medium-term holdings or "active collections" available for breeding operations. Base collections in seed genebanks will be largely completed by 1992, while those dealing with <u>in vitro</u> cultures will still be in the very early stages of development. These latter will likely comprise only a limited number of crops for which adequate research would have been completed. Along with the preservation of samples in genebanks, IBPGR will also initiate major advances in:

- i) the characterization of samples including documentation in databases categorized by crop and covering the holdings across centres throughout the network
- ii) further collecting but increasingly narrowly targeted to fill gaps in the diversity of collections for primitive forms. Especially important will be the widening of the representation of wild and weedy relatives of selected species
- iii) increasing understanding of patterns of diversity within the crop genepools through inter-disciplinary research. Such research will enable i) and ii) above to become progressively more defined leading to enhanced use of collections by breeders and scientists.

While the time horizon of the latter effort (up to 20 years) makes specific outputs over the next 5-10 years difficult to quantify, there is no doubt that several very significant qualititative charges will result: a) samples in conservation collections will be more secure with the duplication of materials in several base collections; b) the basic guidelines for the management of active collections will have been developed and implementation begun; and c) the cooperating centres will have incorporated improved scientific methods for collection, describing and regenerating germplasm samples which result from IBPGR research efforts.

The research agenda over the next five years comprises a number of initiatives related to the objectives described above. However, new scientific developments add a strong element of unpredictability requiring that IBPGR continue to have the flexibility to alter priorities somewhat and to add new initiatives to the agenda. This is particularly true with the newer molecular techniques for description which will undoubtedly impact on several programme elements in the research strategy requiring some changes and course corrections during the years. This present budget submission represents the best estimate of the needs at this time, and as in the past the Board will report to the TAC and CGIAR when it appears that any significant change in strategy is necessary.

#### 4. Interaction with other CGIAR Centres

The IBPGR was created by the CGIAR as one of 13 international institutions fulfilling a very specialized role which in part included the other international centres but which also went beyond the mandates of those institutions. Of the 12 other international centres of the CGIAR, 9 of them (CIAT, CIMMYT, CIP, ICARDA, ICRISAT, IITA, ILCA, IRRI, and WARDA) perform a range of genetic resources work related to their specific mandated crops and including conservation and distribution of materials to breeders. In that work, IBPGR works closely with each Centre, careful never to duplicate their own work and to ensure that the results of their efforts are given maximum effectiveness in the other centres throughout the network.

Since IBPCR has a broader mandate with respect to the conservation of genetic material, it works with a wider range of crops and plant material than any other CGINR Centre as well as with a larger number of countries (in both the developing and developed world) than the other Centres. It also plays a more major role in monitoring, disseminating and supplementing state-of-the art research wherever it is being undertaken. IBPGR as recognized world clearing house on genetic resources activities receives valuable and continuous input, at no cost to itself, from the research scientists and institutions in the developed countries for use and distribution to centres in

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the less developed countries.

The relationship of IBPGR, therefore, to the other international centres of the CGIAR is best seen as complementary and collaborative but in no way duplicative. Where IBPGR identifies through its network priority actions which might properly be undertaken by the IARCs it discusses such proposals with them, may or may not financially support such work, and uses its good offices to ensure that the results of their work are put to maximum effective use. Operational responsibility in such cases may be totally assumed by the IARC or jointly operated by the IARC and IBPGR.

#### 5. Management and Staffing

To carry out its very diverse range of activities, IBPGR continues to opt for a small Staff operating with great flexibility in supporting through contracts, and in-house activities, individual projects often of a gap-filling nature. These are virtually always in collaboration with other entities. Headquartered in Rome but with work dispersed around the world. IBPGR now has a Staff of 25 professionals (including vacancies). Of the professionals, 55% are involved in the Field Programme maintaining an overview of the field activities, mobilizing funding where necessary, and keeping abreast of principle opportunities and significant constraints. 33% is involved in the Research Programme and 12% in administration. The Staff is organized as follows:

#### Scientific Staff Structure of IBPGR and Proposed Changes (No. person years)

#### Director (1)

Field Drogramme	Posoarch Programmo	Administration
rieia Programme	Nesear chi Programme	nomaniaser deach
Head (1)	Head (1)	Head (1 as of 1989)
Germplasm Acquisition (1)	Genetic Diversity (1)	Publications (1)
Training (1) (2 as of 1990)	Seed Conservation (1)	Library (1 as of 1988)
Information/		
Documentation (1) (2 as of 1990)	In vitro Conservation (1)	Public Affairs (1)
Field Officers	Pathology/Quarantine (1)	Programme Budget (1)
Asia (S & SE) (1)	Evaluation/Regeneration (1)	(Special Projects)
China (1 as of 1988)	(2 as of 1990)	Clerical Staff
Sahel (1)	(Special Projects)	
Eastern & Southern Africa (1)	Clerical Staff	
Latin America (1)		
Southwest Asia/N. Africa (1)		
Collectors (5)		
(Special Projects)		
Clerical Staff		

The structure of the Field Programme is as follows:

 i) Headquarters section: Head plus support staff and 3 professional staff dealing with germplasm acquisition, germplasm characterization, and documentation and training. This level is expected to be supplemented in the areas of documentation and training over the budget period.

- ii) Field Officers: In 1987, 5 officers overseeing activities in Latin America, Western Africa/Sahel, Eastern and Southern Africa, Southwest Asia/North Africa/Europe, South and Southwest Asia. The Field Officers are moved depending on the level of on going activities and the need for additional work in other areas. IBPGR made use of a Special Project mechanism to invite 26 European countries in a cooperative programme on specific crops. In 1988, the Board proposed the addition of one Field Officer to assist in the growing number of activities in China and to link these with efforts in neighbouring East Asia countries.
- iii) Collectors: In 1987 there were 5 collectors at various locations responsible for specific priority crop genepools. They are appointed for limited periods (usually 2-3 years). (For accounting purposes an estimated 10% of the collectors' time is allocated to the Research Programme with the remainder or bulk of the time related to the Field Programme). The number of collectors is expected to remain more or less constant over the budget period.

As stated above the role of the Board since the early 1980s has been modified to place greater emphasis on strategic research, and thus has required a modification in the staffing structure. The research Staff are based in Headquarters and comprise a Head and 5 scientists dealing respectively with genetic diversity research, seed conservation, pathology, in These staff maintain an vitro conservation and evaluation/regeneration. overview of on-going research in their respective areas and are responsible for the placing of contracts for mission-oriented research in laboratories of excellence, usually through competitive bidding. This obviates the need for IBPCR to provide its own equipment and enables IBPCR to capitalize on senior scientist inputs in the laboratories at no direct cost. This mechanism not only is more cost effective but helps IBPGR maintain its comparative advantage as a clearing house in the field by enabling it to keep updated databases on all relevant research including a great deal of confidential and unpublished data. IBPGR's experience has been that renowned scientists are willing to give of their time and advice to IBPCR at no direct cost because they are convinced of the importance of the role the institution. No resources of IBPCR are more valuable than this good will among the world's scientific community.

## 5.1 Relationship with FAO

IBPGR is located within the FAO structure; FAO provides the Headquarters and a number of administrative and financial mechanisms (including the provision of some secretarial salaries) which IBPGR follows. Since FAO has from some considerable time been involved with genetic resources activities, the Board of Trustees of IBPGR has an <u>ex officio</u> member nominated by FAO. This member is also the official in FAO who has responsibility for the IBPGR Staff as well as the more recent FAO Commission on Plant Genetic Resources. IBPGR seeks to ensure complementarity of operations on the basis that it is responsible for scientific and technical matters whereas the FAO Commission is more responsible for legal and political matters. IBPGR views its relationship with FAO as positive and helpful particularly in the operations of its Field Programme.

# 6. <u>Clobal Genetic Resources Network</u>

From the beginning of IBPGR's existence, its most fundamental role has been the developing of a global recognition of the threat to genetic material and the capacity world-wide to meet that threat through mutually reinforcing efforts at all levels and in all regions. This has meant not only developing and strengthening national programmes of developing countries to carry out collecting, conservation, documentation, training and other activities, but also stimulating a host of other institutions in the developed world and the IARCs to contribute and coordinate their efforts effectively. As of 1987, IBPGR had developed cooperative activities in 110 countries ranging from sophisticated laboratory research activities with the advanced industralized countries to single-person collection efforts in some of the smallest and poorest countries.

An additional 20 countries may participate over the next decade fulfilling the goal of a truly world-wide effort. The IBPGR network comprises interlocking institutional arrangements and operational strategy; its multi-faceted activities are instrumental in effecting transfer of technology from the developed to the less developed world. Over the next decade IBPGR will be making maximum use of new technologies to improve scientific standards of genetic resources work throughout the network.

Participation is most important by countries which are located in regions of major crop diversity and since several of these tend to be among the poorest nations, IBPGR attempts to mobilize action by international centres, donor countries, and neighbouring countries to meet the need. In addition IBPGR may provide a package of appropriate advice and assistance tailored to the specific requirements of the national programme. While support for the establishment of a few new genetic resources units will be continued, major emphasis under this activity will be on improving the programmes and capabilities of those centres already established. All national centres once established are expected to be involved in cooperative linkage with other institutions in the network providing inputs and receiving benefits from the work of other institutions. An IBPGR Liaison Officer is being named in each country to act as a focal point for that country's collaboration with other outside institutions.

Illustrative of the activities of IBPGR with respect to the various levels of the network may be the following diverse projects:

- i) in a new national centre in a least developed country IBPGR may provide advice and funds to do collecting or short-term help in developing conservation facilities through a contract which supplies some initial equipment; at a later stage IBPGR may initiate training for specific methodologies or help provide documentation through provision of a micro-computer.
- ii) with centres in developed countries IBPGR might contract with a University laboratory to provide several month's research on a genetic resources problem critical in several African countries or finance publication and distribution of a definitive scientific report of value to developing countries.
- iii) with the IARCs the IBPGR may send several trainees for specialized study, jointly collect germplasm or promote networking through the activities of the IARC on its mandate crop.

Since the world-wide task of genetic resources conservation is so huge in relationship to IBPGR's limited budget, the principle role of the organization is to encourage and stimulate actions by others in the field. As an example of this catalytic role IBPGR is instrumental in developing plans for the establishment of a regional genetic resources centre in the SADCC association of southern African countries. After initial planning assistance from IBPGR, it is expected that principle funding for the activity will be provided by Nordic donor agencies. As another example, Japan is providing Special Project funds for activities in Papua New Guinea. The hope and expectation is that such activities will increase in the future with IBPGR providing a planning and advisory function and other donors providing funding and both IBPGR and the donors jointly monitoring the work.

The budget estimate for 1988 is \$1,425,000 divided among the following sub-programmes.

- i) Developmental activities: Finances the work of the IBPGR Field Officers to help in a variety of functions to strengthen the national, regional and other institutions in the global network. Approximately 30% of the programme is devoted to this sub-programme. This is expected to increase marginally in 1988-89 by the addition of 1 Field Officer to handle increasing requirements in China.
- ii) Base collections in genebanks: This involves the completion of the network of IBPGR-designated base collections for long-term seed conservation of major crops through a) the designation of priority crops with duplicate collection storage, b) the development of a register of centres which meet IBPGR international standards, and c) the improvement of standards in centres which do not meet IBPGR criteria for registration. This activity accounting for about 10% of the funding will be phased down somewhat by 1990. A detailed database is being developed and guidelines for follow-on practical action being devised.
- iii) Active collections in genebanks: This relates to the growing network of active genebanks for the multiplication, regeneration, characterization, and medium term storage of designated germplasm collections as well as to arrange the distribution of germplasm through the network. In 1987, IBPCR initiated a 2-year programme to assess existing active collections and to develop a framework for global linkages among such collections. The setting and monitoring of standards to ensure acceptable conservation and documentation will be a high priority of the next 5 years. This activity representing about 30% of the programme in 1987 will be expanded to approximately 40% in 1992.
- iv) Data Management and Transfer: Efforts will continue to strengthen national capabilities in computerized documentation of germplasm collection (with emphasis on passport and characterization data).

In all of these activities of the network it is intended that the IBPGR Field Officers play a greater role to ensure that work at the national level meets international scientific standards.

## 6.1 Staffing, Cost Assumptions, and Budget Summary

The staffing of 5.08 scientific man-years in 1988 is expected to remain almost constant to 1992 depending on special project staff. However, as described earlier a proportionately smaller share of the work will be devoted to the already-established base collections, and increasing action will be paid to the active collections. Special projects in several years are expected in the area of active collections as well as support to some national programmes in LDCs. Other support costs (aside from staffing) total in 1988 are expected to rise to in . This is due to personnel costs plus the application of standard inflation factors.

The overall budget for this project is:

1987		1988		1989		1990		1	991	1992	
SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000

Staff	5.08	250	5.08	250	5.58	300	4.58	250	4.58	250	4.58	250
Other costs		620		734		715		810		870		935
Special projects	5	364		441		349		450		450		369
Total		1234		1425		1364		1510		1570		1554

## 7. Germplasm Acquisition

The IBPGR programme on germplasm acquisition is wide-ranging, and in addition to the collection of germplasm, involves many pre- and post collecting activities. It is divided into four sub-programmes:

- a) Monitoring of genetic erosion
- b) Collection of endangered germplasm
- c) Selected collecting to fill diversity gaps
- d) Facilitation of germplasm distribution

During the first decade of the IBPGR major emphasis was placed on the collection of landraces and old cultivars of major crops, and this resulted in the acquisition of a considerable amount of genetic diversity of priority crops capable of satisfying breeders' needs for this type of material. For scientific reasons the IBPGR has in recent years agreed that such generalized collecting should be reduced and that there should be a concentration on crops and areas where there is a real threat of genetic erosion and on filling gaps in the collections. In addition, there is a major need for stronger emphasis on the wider genepools of wild and weedy relatives. As a result, IBPGR collecting activities will be increasingly focused at specific targets of high scientific priority.

Other factors which will improve programme effectiveness over the next several years are the following:

- Computerized Database a major advance has been made in the development of a computerized database located at IBPCR headquarters holding summary information on germplasm collected through IBPGR supported missions. As from mid-1987 the system has been fully operational and will now be routinely updated. Relevant subsets of the data base will be maintained in the IBPGR Field Offices to ensure a better information service as well as more rapid updating.
- More effective supervision and coordination the IBPGR now has a headquarters officer responsible for overseeing the full range of germplasm acquisition activities and also responsible for supervising IBPCR collectors in the field.

- Increasing field staff, information gathering on the extent of genetic erosion - Field Officers are being increasingly sensitized and trained to recognize and evaluate genetic erosion and to plan if possible appropriate rescue operations. To assist them IBPGR is developing and testing a series of procedures and techniques to objectively monitor any imminent threat of erosion in some major areas of crop diversity and to initiate appropriate actions. This monitoring will form an increasing part of the total programme during the forthcoming years.

n. Monitoring of Genetic Erosion: This work would be generally carried out by the Field Officers and their collaborators who will keep the IBPGR informed on genetic erosion. These will be supplemented by knowledge of specialists in order to identify areas of real threat.

B. Collection of Endangered Cermplasm: This includes support to field missions to rescue germplasm samples of endangered genepools (priority crops and their wild relatives) and therefore includes emergency situations. In this sub-programme IBPGR Staff, consultants and collaborators will be involved and in addition the IBPGR will provide assistance or support to the national programmes when completed to undertake the work. In 1988, more attention will be paid to wild species of major crops than hitherto and also to forages of the tropics, sub-tropics, Mediterranean and adjacent arid areas (see Table 7.1).

During the budget period this will constitute a declining percentage of the total activity.

C. Selective Collecting for Diversity Gaps: As the generalized collection will slow done, the purpose of this sub programme is to fill gaps in the existing collections where there is a need for such materials (see Table 7.2). This implies active documentation of existing collections (see below).

D. Facilitation of Germplasm Distribution: All collected materials are distributed to designated genebanks for long-term conservation and from there to active collections for immediate description and use.

- 1982, IBPCR established 5 small i) Cermplasm tranofer In seed-distribution unit at the Royal Botanic Gardens, Kew, UK, to facilitate movement of seed material from ofrica and neighbouring areas to designated genebanks both in Africa and other parts of the world. Seeds are cleaned, dried, and packaged for direct deposition into genebanks so as to avoid potential reductions in seed quality and viability. In 1987-88 a similar facility will be established at the University of Singapore to facilitate distribution of materials from nsia, and in 1988, the feasibility of developing another such unit in Latin America will be explored.
- ii) Pathology Beginning in 1987, greater emphasis is being placed on the quarantine aspects of transfer. This is required since a larger percentage of the material collected will be distributed to active collections for immediate use rather than as previously when samples were largely deposited in base collections.

# Table 7.1 Collecting of targets for wild species

	Таха	Areas			IBPGR AC	tivities		Comments
			pre	1980	1980-85	1985-90 19	90-	
Cereals1/								
Rice	<u>Oryza</u> African	Africa		-	ad hoc	+		IRRI has taken responsibility
	spp.							for Asian species, IBPGR for
								African species.
Pearl Millet	Pennisetum	Sahel and		-	+	+		Genepool both for pearl millet
		other parts						and forages.
		Africa, Mexico and						
		Ecuador						
Triticum/Hordeum	Triticeae	Mediterranean/China		-	-	+	+	Genepool both for cereals and
								forages
Oat	Avena	Mediterranean		-	-	+	-	(Special project work)
Sorghum	Sorghum	Eastern and Southern	1	-	-	+	+	Also forage forms
		Africa						
Legumes								
Groundnut	Arachis spp.	S. America		+	+	+	0	T
Bean	Phaseolus spp.	C. and S. America		-	+	+	-	Taken over by CIAI
Vigna	(numerous	Africa		-	-	+	+	In association with IIIA
	species)	Asia				+	+	Also torage forms
Soyabean	Glycine	Oceania		-	+	+	+	Complete by 1988-89 it material
	perennial spp.							can be collected in china
Roots & Tubers 1/								
Sweet potato	Ipomoea	S. America		-	-	+	-	CIP will assume responsibility
								in 1988
Cassava	Manihot	S. America		-	+	+	-	
Aroids		Asia		-	-	-	+	
Vegetables								
Allium		Eurasia		-	+	+	+	
Okra	Abelmoschus	Africa/Asia		-	+	+	-	Finished by? 1989
Tomato	Lycopersicon	S. America		-	+	+		Finished by: 1987
Chile	Capsicum	S. America		-				Finished by: 1990
Brassica		Mediterranean			+	+		rinished by: 1969
	C 1	ASIA			-	-	+	Finished by 2 1999
African eggplant	Solanum	Africa		-	+	+	-	Finished by : 1966
CUCURDITS		L. America/Atrica		-	-	+	+	
Fruits								
Mango	Mangifera	S.E. Asia		_	-	+	+	
Banana	Musa diploids	S.E. Asia			-	+	+	
Citrus relatives	Aurantioideae	S.E. Asia		-	-	+	+	×.
				in the second second				
Others								
Beet	Beta	Med./S.W. Asia/Europ	e	-	+	+	+	Gap filling
Sugarcane	Saccharum	Asia		-	+	+	+	Gap filling
Сосоа					+	+	+	
Cotton					+	+	+	
Coffee							+	

 $^{\perp\prime}$  Maize and potato are not included because of joint CIMMYT-INIA work and also work of CIP since 1971.

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No.

CROP	Areas	1985-1990		<u>1990</u> –	
<u>Comments</u>					
Cereals					
Rice	Asia/Africa	+	-	gap-filling (Asia	
				-IRRI, Africa,	
				IBPGR)	
Pearl millet	Africa	+		gap-filling	
Sorghum	Africa	+		gap-filling	
Wheat	Southwest Asia	+		gap-filling	
Barley					
Maize	Asia	+	-	gap-filling	
1					
Legumes					
Grr dnut	South America	+	-	In conjunction	
				with wild	
				Arachis spp.	
Phaseolus	Secondary divers	sity		gap-filling	
Vigna	Asia	+	+		
Soyabean	Primary diversi	ty +			
Root & tuber crops					
Sweet potato	Latin America	+	-	CIP will assume	
				responsibility	
				in 1988	
Cassava	Latin America	+	-		
	and Africa				
Aroids and yam	Diverse Areas	+	+		
Vegetables					
Allium	Southwest and	+			
	Central Asia				
Okra	South Asia	+	-		
Capsicum	Latin America	+	-	gap-filling	
Cruciferae	South and East /	Asia +	+	Vegetable and	
				oilseed forms	
Eggplant	South Asia	+	-		
Cucurbitaceae	Latin America	+	+		
	Secondary divers	sity	+		
17					
Fruits -					
Others					
Sugarcane	Southeast Asia	+	-	gap-filling	

I' For the highest priority fruits (mango, banana, citrus) only wild species collecting will be undertaken (see Table 1)

#### 7.1 Cost Assumptions, Staffing and Budget Summary

The cost assumptions are based on a constant number of 5.25 scientist man-years over the entire budget period with the overall level of activity remaining about constant in real terms after allowing for inflation. The principal cost components of the budget are itemised below. In addition to those continuing activities financed under the core budget, the requested additional will allow the Board to initiate and expand collecting in remoter areas.

The projected budget is as follows:

	19	087	1988		1 9	1989 1990		990	1991		1992	
	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000
Staff	5.25	250	5.25	250	5.25	275	5.25	275	5.25	300	5.25	300
Other costs		330		398		400		425		425		450
Special projects	3	87		100		150		178		183		200
Total		667		748		825		878		908		950

## 8. Germplasm Characterization and Evaluation

Meaningful documentation of plant genetic material is essential in order to study the spectrum of genetic variation within cultivated species and their wild relatives and to facilitate the selection from accessions in genebanks of germplasm for crop improvement. Since its inception, IBPGR has been supporting the preparation and publication of internationally agreed descriptor lists for crops. More than 60 IBPGR descriptor lists have been published covering most of the major and a number of minor crops. This programme component will continue to receive high priority, but over the next 5 years efforts will concentrate on better definitions of descriptors and also listing of gene symbols.

In the past, only a small portion of the germplasm collected has been characterized. IBPCR has been actively supporting and/or encouraging genetic resources centres to grow out materials and to capture data on characterization and limited evaluation of samples (Table 8.1). IBPGR intends in 1988-93 to place greater emphasis on crops other than the mandated crops of the IARCs and also to merge IARC databases with those of significant national collections (Table 8.2). The role of the IBPGR is as a "pump-primer" with follow-on maintenance and updating of databases left to others, mostly national institutions.

This activity for which a total of \$738,000 is programmed for 1988 is composed of the following sub-programmes.

i) Data Acquisition from Accessions: This sub-programme deals primarily with the capture of data relating to characterization and evaluation of samples through cooperation with national and international organizations. In most cases, especially for national programmes, IBPGR support is required, whereas work at the IARC is becoming largely self-sustaining. Approximately 40% of the funding for this activity is devoted to this sub-programme. ii) Data Analysis and Application: The assembling and ordering of passport information on existing collections, the filling of gaps in the data for significant collections (by reference to geographical and climatic data bases) the publication of catalogues, analysis of characterization and evaluation data and facilitating the flow of such information among scientists, breeders, and germplasm centres are the major aspects of the subprogramme. IBPGR has already established a number of major crop databases, and this work which has proven to be of considerable use to scientists and breeders will continue to be expanded.

There are still some difficulties in data flow from many centres but efforts are underway to encourage those centres to transfer data or to complete and update crop databases. This is a relatively slow process in the initial period but as centres strengthen their documentation systems the work will be expanded. A simple protocol for data exchange was worked out by IBPGR in 1984. This will now be adjusted to take advantage of new technological developments in data transfer between computers.

In addition to the development of crop databases, work will continue on the publication of directories of crop germplasm collections providing ready reference for breeders to identify collections where material and/or further information can be obtained. IBPGR has a Headquarters officer responsible for coordinating the information and documentation activities. Because of the greatly increased work load in the 1988-1990 period resulting from the accumulation of data of centres growing-out materials, it is proposed that a second Information Officer be appointed on the core programme in 1990. Approximately 20% of the funds are devoted to this subprogramme.

iii) Evaluation Strategy: In 1986 IBPGR organized a workshop to discuss and design strategy on managing and better using germplasm collections. As a result testing will begin in 1987 of the concept of a core collection in which representative subsets can be made readily available providing an easy point of entry to germplasm collections for breeders.

In 1988, core collections (or subsets) will be tested against randomly selected materials to determine the advantages of such a system, and once these are known, such cores can be implemented at the collection level. IBPGR has at present one officer in charge of this work and this is combined with work on regeneration. A great deal of further work will need to be done on organizing and monitoring the regeneration and description of germplasm samples currently housed in collections, and this work will continue to receive priority over the next 5 years.

There is always an issue as to the degree to which IBPGR should itself perform these evaluative activities and to what extent it should rely on others such as plant breeders. As in other areas IBPGR intends to be flexible performing a gap-filling function and is identifying research leading to improved standards (e.g. of regeneration) as needed and clearly within its purview (this is covered in the Research Programme on seeds).

Approximately 40% of the total funding devoted to Germplasm Characterization and Evaluation is devoted to this subprogramme.

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## Table 8.1 Germplasm Characterization and Evaluation

## Current Objectives

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1. Develop and to promote the use of standards for characterization/preliminary evaluation and documentation of germplasm collections.

2. Encourage and support characterization of major collections in the network.

3. Promote the establishment of international crop data bases and assure active information service to users.

4. Develop cost-effective strategies for evaluation of genetic variation in collections

#### Continuation of work already initiated

1. Formulation, revision when necessary, and publication of internationally-agreed descriptor lists for crops.

2. Support toward comprehensive characterization of collections of priority crops.

3. Update and periodic publication of directories of germplasm collections to provide a user service.

4. Research and development work on core collections (or subsets).

#### New work

Development of new international crop data bases (see Table 8.2). New systems will require 3.5 years of development before then can assume active information service to users. By 1993 most of the crops of IBPGR priority 1 and 2 should be covered.

Scope	Collaborating Centre 2/
Mediterranean	Universidad Politecnica, Madrid, Spain
European	CGN, Netherlands, Wellesbourne, UK
Primary diversity	CGN, Netherlands
Global	Cocoa Research Unit (CRU), Trinidad
Global	IRCT, Montpellier, France
Global	PORIM, Malaysia
Global	CIP 1/
Global	AVRDC 1/
Global	ICRISAT, ICARDA $\frac{1}{2}$
Global	ICARDA 1/
Global	ICRISAT 1/
Global	NGB, Sweden
Clobal	CATIE, Costa Rica
Global	IITA $\frac{1}{2}$
	ICARDA 1/
Clobal	CIMMYT 1/
Global	INIBAP
	Scope Mediterranean European Primary diversity Global Global Global Global Global Global Global Global Global Global Global Global Global

Table	8.2	International	data	bases	at ar	n early	stage	of	establishment
		an	d/or	planne	d for	1987-9	3		

- <u>1</u>/ Currently IARCs have data bases dealing with their <u>own</u> collections. IBPGR will seek collaboration to expand these. They may or may not be based at the IARC depending on collaborative arrangements to be worked out.
- <u>2</u>/ It is proposed that a number of regional databases dedicated to wild species will be organized using special project funding. These come under the purview of IBPCR's genetic diversity research.

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## 8.3.1 Cost Assumptions, Staffing and Budget Summary

As described above the numbers of man-years devoted to this activity is projected to rise from 2.67 in 1987 to 4.67 in 1990.

The projected budget is as follows:

	19	087	1988		1989		1990		1991		1992	
	SMY	\$000										
Staff:	2.67	135	2.67	135	2.67	135	4.67	240	4.67	240	4.67	250
Other costs		535		603		638		630		460		500
Speical projects	5									200		200
Total		670		778		773		870		900		950

## 9. Training

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Undoubtedly, the most important long-term contribution of IBPGR, aside from developing the global network for genetic research, will come as a result of the scientists and technicians who have been trained to staff the national, regional, and international institutions which comprise that network and who are essential to making it self-sustaining. Thus far, 1,300 personnel have directly benefitted from IBPCR's training activities including approximately 600 in post-graduate training, about 700 in short-term specialized technical training, plus an estimated 60 individual study tours and workshops, and about 20 intern fellowships programmes at genetic resources laboratories and centres. Each of these activities with varying degrees of emphasis will continue over the 1988-1992 budget period.

Nevertheless trained manpower remains in short supply in most developing countries, and IBPGR continues to see great need for specialised training programmes to provide conceptual, technical and management skills to meet the essential needs of national programmes. Technical and scientific training will continue to be needed and provided in various fields of genetic resources activities including seed handling, seed physiology, genebank management, handling of in vitro cultures, etc. Additional training will also be provided in data collection, management, and distribution to enable the centres to play a more effective information role in the worldwide network. Therefore, while a core staff has already been trained worldwide, the overall magnitude of IBPCR's training effort will not decline but will continue to increase over the next five years from a level of \$650,000 in 1988 to a projected \$1 million in 1993. This is the result of several factors: 1) the addition of new centres in additional countries; 2) the expansion of efforts in existing centres, often to take over responsibility for activities previously carried out by an outside donor; 3) rapidly changing technology requiring an updating of skills on a highly selective basis; 4) a growing recognition of the need for effective data and information management; and 5) fostering of meaningful linkages with practical action programmes of applied research.

The major constraint on IBPGR's training effort continues to come not from a lack of funding but from: 1) a scarcity of qualified candidates who can be spared from their day-to-day operational responsibilities and 2) the lack of LDC funds for using qualified personnel effectively in their national centres once they are trained. Reflecting the experience of the training programme over the last decade, IBPGR will give additional emphasis to the following over the budget period:

- a) Greater use will be made of existing national centres as training sites for personnel from other centres. Training at those sites will likely be at a more appropriate level and longer term linkages between national centres will be established.
- b) Centres will be encouraged and assisted to develop realistic training plans related to specific projected personnel needs. These can then be used to direct training funds available from donors other than IBPGR to meaningful institutional objectives.
- c) Training will be more specifically related to the centre's immediate programme needs. While about 65% of IBPGR-assisted post-graduate trainees and 80% of IBPCR assisted short course trainees have returned to work in the field and institution intended, more specialized training will help ensure that personnel trained will continue to be employed in functions necessary to building self sustaining centres.
- As part of the 1986 restructuring, a full-time officer was appointed to oversee the training activities of IBPCR. Overall management of the programme and particularly follow-up evaluation should be greatly improved as a result;

Table 9.1 shows in greater detail the proposed changes in training operations in the 1989-1993 period.

The programme will continue to include 4 activities:

a) <u>Post graduate courses</u>: The training programme leading to a M.Sc. degree in Genetic Conservation and Utilization at the University of Birmingham, U.K. will be continued as recommended by the 1985 IBPGR evaluation. As a result of that evaluation, discussions have been held with the University to revise course content to make it more immediately relevant to the scientific/technical needs of the national and international programmes. The curricula are kept under constant review to be sure they include evolving research techniques.

To meet the need of training in French at a similar level, a one-year training programme was initiated in 1985 at the Faculty of Agronomic Sciences at Cembloux, Belgium. A course in Spanish will be initiated in 1987/88 to meet the needs of Spanish-speaking trainees. In addition, selective training at the post graduate level will continue to be provided from time to time at International Centres and other institutions. The normal period of training is one from developing calendar year. Approximately 15 participants countries will receive IBPCR fellowships per annum to attend these courses. The principle focus will be developing staff for the newly-formed national centres. In addition to the directly-financed IBPGR sponsored trainees, an estimated 15 trainees will participate in these courses sponsored by themselves or other donors.

b) <u>Specialized short-term technical courses</u>: In view of the pressing need for specific manpower skills at the research or technician level in developing countries, IBPGR will continue to organize and/or support short specialized training courses. The courses may be by crop or group of crops, specific category of genepool or particular genebank operationsc. Efforts will be continued to offer the courses in major international languages making greater use of past trainees. IBPGR contributes both through the provision of study and travel grants for individual participants as well as through direct support in the development of needed courses. In both cases, other donors usually play a key role as well. As examples of IBPGR's collaborative effort in this field, it worked with NIAR and the Japanese assistance agency to develop and operate a 4-month training course on plant genetic resources.

An estimated 60-70 participants averaging study of 70 person months will be programmed in 1988. Greater use will be made of "distance learning" which is currently under development by IBPGR.

- c) Individual Training Programmes: IBPGR will continue to provide some limited fellowships and travel grants to scientists from developing countries to undertake study tours and for on-the-job training at genetic resources centres and other institutions as well as to enable them to participate in appropriate workshops and symposia. While the need for highly individualized observation tours and on-the-job training will remain as the number of scientists and trained technical specialists in the national centres assuming positions of responsibility increases, IBPGR does not envisage increasing support in this area.
- d) <u>Intern Fellowships</u>: A scheme initiated in 1985 by IBPGR to give supervised research experience to young scientists at genetic resources centres has proved highly successful. The internships, usually for one to two years, have been with various research institutions or directly under the supervision of the Research Section of IBPCR. This activity will continue to assist the upgrading of genetic work in the network and help provide a succession of younger skilled personnel.

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Table 9.1	Proposed	Changes	in	Training	Operations	(1989-93)
		Topics	/0p	erations		

Programmes	New initiatives	Greater emphasis	Continued emphasis	Scaled down
Postgraduate Courses.	-Distance learning modules in conservation and evaluation methods;	-Tropical/subtropical crops -Wild genepools;	-Documentation -Temperate cereals;	-General courses
	-Trainees research projects to focus on problems of regeneration and multi- plication of allogamous species; ecogeographic studies; cryopreservation, concepts of core collections	-Forage crops; s.	-Vegetatively- propagated crops and wild relatives	d
Sh courses	- <u>In vitro</u> techniques for sampling and conservation of vegetatively-reproduced forages, range species and fruit-tree germplasm;	-Concepts & practice of characterization during multiplication/regeneration (forages, food legumes and cereal crops);	-Seed storage techniques (incl. sequential testing) for national pro- grammes;	-General courses
	-Exploration & sampling of specific crop genepools;	-Wild genepool collecting techniques & ecogeographic	-Documentation of data on collections surveys.	
	-Herbarium-techniques for wild genepool exploration planning;		-Fruit-tree germ- plasm conservation incl. quarantine protocols.	
	-Planning and management of genebank operations for long- and medium-term.			
ndividual programmes	- <u>In Vitro</u> storage techniques	-Characterization and evaluation of collections;	-Hands-on work for management of genebanks.	-Study tours
		-Upgrading of data-managemen of genebank collections.	+	
Staff training (Intern Tellowships)	-Research management for senior staff;	-Modern approaches to germplasm collection management.	-Documentation;	
	-Planning for national programme operations (long- & medium-term);			×
	-Problems or quarantine for germplasm exchange and storage;			
	-Regeneration/multiplication & evaluation of germplasm collections.			
	In vitro collecting methods.			

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## Cost Assumptions, Staffing and Budget Summary - Training

The cost assumptions are based upon solid experience with each of these subprogrammes, and except for the built in inflation factor we do not foresee any major programmatic changes which are likely to alter per unit costs.

			Costs \$0	000		
Subprogrammes	1987	1988	1989	1990	1991	1992
Post-graduate courses	200	225	250	250	260	290
(per person per year)	(20)	(20)	(22)	(25)	(25)	(25)
Short-term courses	145	150	170	210	260	310
(per person month)	(2.5)	(2.6)	(2.8)	(2.9)	(2.9)	(3.0)
Individual training	35	35	30	30	30	30
(per person month)	(3.0)	(3.0)	(3.2)	(3.2)	(3.2)	(3.2)
Intern fellowships	230	250	280	280	280	280
(per person year)	(29)	(31)	(31)	(33)	(33)	(33)
Total cost	610	650	730	770	830	910

## Staffing

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The staffing requirements for the training programme will increase from one to three person years over the budget period; In addition to the present training specialist, two assistants will be added. This is required as the training content becomes more specialized and due to the increasing scientific work load in national centres.

## Budget Summary - Training

	1987		1988		1989		1990		1991		1992	
	SMY	\$000										
Core Staff	1.08	40	1.08	42	1.08	45	2.08	90	2.08	92	2.08	94
Other costs		570		618		635		630		668		746
Special project:	6				1.00	50	1.00	50	1.00	70	1.00	70
Total		610		650		730		770		830		910

## 10. In Vitro Culture Research

Since the early 1980s, IBPGR has been involved in developing a programme of <u>in vitro</u> conservation, and significantly increased its support to this activity in 1986. The objective is to develop <u>in vitro</u> techniques for the collection, conservation, and exchange of the widest range of genotypes of specific crops which are difficult to conserve using conventional seed storage methods. Priority crops for <u>in vitro</u> culture research have been identified and research is currently in progress on sweet potato, cassava, cocoa, banana, <u>Xanthosoma</u>, <u>Allium</u>, taro, sugarcane and <u>Citrus</u>. Thus far significant progress has been made in developing <u>in vitro</u> culture techniques, and other promising techniques are being tested for collection of cacao, coconut, and tropical grasses. During 1988-93, refined techniques will become routine in germplasm collection, and this will lead to a more active involvement of IBPCR to establish <u>in vitro</u> genebanks in the early 1990s. The specific activities supported by IBPGR are reviewed in the IBPGR Research HIghlights: <u>In Vitro</u> Programme published in 1986.

The in vitro research programme has been divided into 5 subprogrammes:

1. Collection and tissue culture technology to develop widely applicable culture techniques and to develop cost-effective <u>in vitro</u> collection procedures.

2. Disease indexing and therapy — to develop suitable disease indexing and therapy techniques to facilitate the exchange and storage of disease-free material.

3. Cryopreservation — to develop suitable procedures for the storage of germplasm of specific crops by cryopreservation.

4. Genetic stability - to examine the scientific bases of genetic instability in <u>in vitro</u> systems (under slow growth and cryopreservation).

5. Pilot study for in <u>vitro</u> genebanks — to test theoretical assumptions in a pilot study, and subsequently to provide advise on the establishment and management of in <u>vitro</u> genebanks.

To carry out its programme, the Board provides contracts and research funds to institutions and some individual scientists at the national, regional, and international centre levels of the network. In 1985, an <u>In</u> <u>Vitro</u> Storage Advisory Committee was established by the Board to define principles, priorities, and most cost-effective methods to govern the programme. A total of 15 contracts were on-going in 1987 and this is expected to increase to 25 totalling \$940,000 in 1990.

Each of the subprogrammes is discussed below including the progress and prospects for each and the level of resource input seen as necessary over the forthcoming years.

1. Collection and culture technology — the promise of more practical and cost effective methods for germplasm collection using the <u>in vitro</u> technique has already been achieved as a result of IBPGR-sponsored work on cacao in the Amazon region. Other activities include a 3-year effort involving the development of an <u>in vitro</u> method of collecting coconut (through zygotic embryos) in the Ivory Coast and a 2-year project of <u>in</u> <u>vitro</u> collection of tropical forage grasses. In addition to these continuing activities, new research efforts will be initiated on <u>Citrus</u> relatives, <u>Vitis</u> and yams, among others, over the next few years. Approximately 40% of the total <u>in vitro</u> research effort is directed at this subprogramme. This is expected to decrease in real terms over the next five years. 2. Disease indexing and therapy: The purpose of this subprogramme is to develop suitable disease indexing and therapy techniques to facilitate the exchange and storage of disease free material. All materials stored in <u>in vitro</u> collections must eventually be indexed, but immediate work has begun on banana and sweet potato with other priority crops to be given attention over the 1988-1993 period. A Working Group was convened in August 1987 to formulate longer term research efforts and these (together with the pathological aspects of seed transfer and storage) will be overseen by a full time Officer in the Research Section. IBPGR expects to initiate appropriate research, and approximately 25% of the <u>in vitro</u> research effort will be related to this subprogramme.

3. Cryopreservation: This is to develop suitable procedures for the storage of germplasm. Work thus far initiated by IBPGR includes cassava, <u>Musa</u>, sweet potato and temperate fruits.

Evidence shows that cryopreservation is feasible for many species but still requires additional research and testing before practicable methods 22n be recommended with confidence. IBPCR will continue to encourage laboratories to undertake research in this area.

Because of the promise of this process, the Board intends to increase its support in this area from a level of 18% in 1986 to an estimated 20% in 1988 and through to 1993.

This subprogramme will continue to be carried out principally by subcontracts to centres of excellence which will provide senior scientist input at no direct cost.

4.Genetic stability: The subprogramme examines the scientific basis of genetic instability in <u>in vitro</u> systems (under slow growth and cryopreservation), since there are virtually no good scientific data on genetic stability in <u>in vitro</u> cultures. In 1986, the Board initiated two projects to examine the stability of cultures in storage under both slow growth and cryopreservation. This effort is expected to be completed before 1990. In the meantime, monitoring of this research will enable additional follow-on work as part of this subprogramme in the ensuing years.

5. Pilot study for <u>In Vitro</u> genebanks: The <u>in vitro</u> committee has studied the principles to be taken into account in designing and operating <u>in vitro</u>-active and <u>in vitro</u>-base genebanks. From its experience in assessing existing culture collections and procedures, the Board agreed that a pilot active genebank should be established to provide a realistic and practical test of the preliminary conclusions already reached. The results of this study undertaken jointly with CIAT are expected in 1988-89. The IBPCR carries out this activity through financing the services at CIAT and providing some operating costs for staff.

## 10.1 Programme Management and Implementation

As for all research programmes, cost effectiveness depends on several key factors: a) careful determination of priorities based on demonstrated need; b) identification of specific objective or output desired; c) enlisting of most effective research institutions or individuals; d) careful monitoring of progress including adequate provision for course correction; e) effective dissimination of results, and f) testing and identification of elements requiring additional study.

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Since IBPGR performs an essentially catalytic, gap filling role in this as in other areas of research it attempts principally to supplement on-going existing research to meet newly identified needs and perhaps even more importantly to make the results of research sponsored by other institutions more relevant and available to the needs of the network. Thus the range of IBPGR-sponsored research activities in any given year should be seen not as a total and comprehensive attack on a problem but rather as filling the gaps in the efforts of others to more adequately address the problems of the centres. But, experience has shown that in this programme area IBPGR input has rapidly become the major source of funds and expertise.

Specifically the Board requires each proposed research contract to have undergone the following process before being awarded (or renewed) on an annual basis:

1. <u>Assurance</u> that there is adequate senior manpower at no direct cost.

2. Assurance that the laboratory is well equipped.

3. IBPGR priorities and recommendations are fully taken into account and there are linkages between crop institutes in the developing world and laboratories of excellence in the developed world.

Significant in the next quinquennium will be a marked attempt of IBPGR to contract this research more and more in developing countries.

## 10.2 Resources Needed

In summary, the In Vitro Research Programme will over the 1988-93 period -

- a) continue development of protocols for slow growth and cryopreservation of specific species; examine further application of the <u>in vitro</u> collecting techniques; and continue updating of the international data base on <u>in vitro</u> research and provision of user services.
- b) initiate new research on disease indexing and transfer of materials; establish more pilot <u>in vitro</u> genebanks; and produce and distribute relevant materials in interdisciplinary topics related to the research.

This will involve a continuing effort rising from \$700,000 in 1987 to about 985,000 in 1992 and which after allowing for inflation remains almost constant in real terms. In 1988 about \$500,000 will be required for continuing multi year activities already underway and \$282,000 for new activities. To manage the programme staff requirements are expected to rise from 2 person years in 1988 to 3.25 in 1992 (1 of which will be special project). This is necessary in order to capitalise adequately on the dispersed relevant activities.

## 10.3 Cost Assumptions and Budget Summary

The principal cost components of the budget are: a) staff management (2 person years at \$100,000 in 1988), b) individual research grants averaging \$622,000 (but ranging from \$5,000 to \$60,000) and \$810,000 for support of publication and dissemination of research results.

	1	1987		1988		1989		1990		1991		1992	
	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	SMY	\$000	
core:												-7 4 5	
contracts		613		682		6/1		702		/45		/45	
Staff management	1.75	87	2.0	100	3.0	150	3.0	150	3.0	160	3.25	170	
additional:	tv												
new activit	cies					50		50		70		70	
Total		700		782		871		902		975		985	

This will result in a projected budget as follows:

#### 11. Genetic Diversity Research

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IBPGR, in recent years, has increased its emphasis on broadening the genepool in collections with representative variability from the wild and weedy relatives. It has also initiated studies to better understand the origin, evolution and variation patterns of crop genepools. A total of \$600,000 is proposed for this activity in 1988. Research is being supported in four areas:

(i) Species mapping: for a large number of priority wild species, the limites of distributional areas are uncertain and flowering and seeding times are unknown. In order to promote effective field work, research needs to be carried out initially on herbarium specimens. In 1986 and 1987, maps were issued for <u>Mangifera</u> and research is being carried out on species of <u>abelmoschus</u>, <u>Beta</u>, african eggplant, <u>Capsicum</u>, <u>Brassica</u>, <u>Citrus</u>, and <u>Vigna</u>.

(ii) Ecogeographical studies: in relation to wild species and forages in particular, specific ecological data are needed in the passport data files. IBPGR is undertaking studies in relation to ecogeographical factors in forages, Pennisetum, Oryza, Triticeae, Mangifera, Prunus, and Allium.

(iii) Biochemical methods: IBPGR is developing and adapting biochemical techniques such as DNA and isozyme analysis to determine the patterns and ranges of variation in most of the species mentioned above.

(iv) Wild relatives of priority crops: following the recommendations of an in-house review on collecting wild species, work will continue and expand through to the 1990s to increase the understanding of genetic systems and the taxonomy of the wild relatives of crop species. The computerization of data obtained during preparatory phases of the collection of wild species will be intensified and the databases of IBPGR will be linked with those of other organizations into a global system. Expansion of this work in the 1989-93 period will require special project funding additional to core.

Since much of the research in diversity is relatively new and could be open-ended, IBPGR has established a clear set of priorities based on needs for germplasm use. The research carried out under this programme will remain largely the responsibility of scientific and academic institutions. However, IBPGR will continue to fund on a gap-filling basis elements for which an immediate need exists and for which alternative funding is not available.

# 11.1 Cost Assumption, Staffing and Budget Summary

The overall funding for this activity will rise from \$505,000 in 1987 to a projected \$800,000 in 1992 including special projects of \$50,000-70,000 per year after 1989. This is based on the need for expanding work to keep pace with the acquisition and description of wild material requiring a rise from 3.3 smy in 1987 to 4.6 man years after 1989 (1.000 being special project)..

	1987		1988		1989		1990		1991		1992	
	SMY	\$000										
Core:	3.34	167	3.67	180	3.67	190	3.67	200	3.67	210	3.67	220
Other costs		338		420		432		442		460		510
Special projects	5	- 4			1.00	50	1.00	50	1.00	70	1.00	70
Total		505		600		672		692		740		800

#### 12. Seed Conservation Research

During the past decade IBPGR's research on seed conservation focused on basic investigations on seed physiology and practical methods of handling seeds in genebanks. The supported research has resulted in both conceptual and technical recommendations for seed conservation. Some of these techniques include a new concept of seed drying: the use of extra low moisture contents and ambient temperatures for long term storage; the modification of the equation quantifying seed deterioration and sequential testing for monitoring viability of stored seeds. IBPCR's work has resulted in the publication of two benchwork manuals for seed conservation and handling.

The programme for which a total of \$480,000 is proposed in 1988 is divided into four subprogrammes.

- (i) Physiology of stored seeds: during 1987-88 under this sub-programme the investigations on seed longevity in certain priority crops such as tropical/sub-tropical forage grasses, that offer specific storage problems, will be continued, special research on seed drying to determine suitable cost-effective medium-term storage will be initiated, and the understanding of the physiology of recalcitrant seeds will be increased. Approximately 30% of the funding for the activity is related to this subprogramme.
- (ii) Genetic stability: it is evident from scientific work that changes at the sub-cellular level which lead to genetic deterioration in stored seed are imperfectly understood especially during very cold conditions. The IBPCR will stimulate research in this area. Approximately 20% of the funds are directed to this sub-programme.
- (iii) Dormancy: seed dormancy is a problem in genebanks since it interferes with germination tests. Dormancy is more common in wild materials including many forages. There is a need for effort to develop improved techniques for overcoming dormancy problems in numerous species and the IBPCR will continue to support research in this area. About 5% of the funding is destined at this sub-programme.

- (iv) Regeneration and genetic integrity: IBPGR has initiated a major study to provide guidelines for maintenance of genetic integrity during regeneration of germplasm samples. The first guidelines will be developed by 1989-90 and their development will be phased with specific research projects identified during the study. Approximately 35% of the funding in 1988 is accounted for by this sub-programme.
- (v) Non-destructive disease indexing: this is a new sub-programme initiated 1987-88 in order to develop techniques to avoid the destruction of valuable germplasm for disease indexing. Apparently 10% of the funding in 1988 is accounted for by this sub programme.

# Table 12.1 Seed Research

Topic	Continuing research	New research 1988-93					
Physiology of seed storage	To continue and strengthen studies on seed storage with low seed moisture content at room temperature and in liquid nitrogen	To initiate support on embryc storage and strategic researc on physiology of recalcitrant seeds					
	dormancy for various collections which have seed dormancy problems						
	To continue research on the cause as frequencies of genetic change in stored seed						
Non-destructive stability monitoring tests		To promote and initiate research to develop non- destructive tests for seed viability					
Regeneration and genetic integrity	Analysis of existing scientific information	Develop specific guidelines and standards for species					
Non∴destructive disease indexing		New research to develop non- destructive seed disease indexing methods					

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# 12.1 Cost Assumption, Staffing and Budget Summary

Overall funding for this activity is expected to rise form \$480.000 in 1987 to \$760,000 in 1992. This is based on a rise from 1.75 scientist man years in 1987 to 2.25 in 1992 plus a standard inflation factor. The modest increase in man years of staffing is related to the addition of pathology and regeneration to the programme, and additional research activities started towards the end of the budget period in 1987.

## Budget summary - Seed Conservation

	1987		1988		1989		1990		1991		1992	
	SMY	\$000										
Core staffing	1.75	87	2.00	100	2.00	110	2.00	120	2.00	130	2.25	150
Other costs		363		534		550		560		585		610
Total		480		634		660		680		715		760

## 13. Support Services

The total range of activities including the research activities of IBPGR are supported by Administration and Technical Services programmes. The former comprises in 1988 2 professionals and 2.5 support staff and includes administration of the Board and its Committees, Office of the Director, Personnel and Finance. The latter comprises in 1988 the technical and scientific planning publications and the library. To carry out these functions 2 professional and 3 support staff are financed:

		1987		1988		1989		1990		1991		1992	
		SMY	\$000										
Persor	nnel	4.08	200	5.25	250	6.25	310	6.25	330	6.25	350	6.25	370
Other	costs		545		680		708		724		760		810
Other	probable												
pr	rojects										90		80
Total			745		930		1018		1054		1200		1270

#### 14. Overall Resource Needs

The overall budget of the IBPGR rises from a level of \$5.611 million in 1987 to a projected \$8.379 million in 1992. Of this increase of \$2.7 million, \$1.927 is accounted for by inflation factored at 5% per year, and only about 2% is accounted for in programme expansion. It finances a continuation of all of the major programme elements with shifts in emphasis in sub-programme as described earlier.

The staffing of IBPGR up to 1987 included 24 scientist man-years related to core funding with 1 additional scientist man-year charged to special project funding. As a result of the restructuring recommended by the external review of 1984-85, the staffing is being increased to 25 scientist man-years in 1988 on the core budget and the 1 man-year related to special projects continues. This increase of 1 man-year is related to the expanded effort in strategic research described earlier. Between 1988 and 1992 an additional 6 scientist man-years (for a total of 31) is projected on the core budget and additionally a total of 3 man-years related to special projects. These increases are accounted for by the following activities: enhanced administration and direction (1 man-year); initiation of new descriptive strategies for germplasm samples (1 my); expanded research in <u>in vitro</u> culture (1 my); rationalization and standardization of databases for major crops (1 my); expanded training activities (1 my).

The IBPGR has always held the view that its programme should not become unbalanced by the excessive use of special projects, but rather once determining that an activity was essential and that after review of other entities was most appropriately within the domain of IBPGR, it should be incorporated into the regular ongoing programme.

The IBPCR will continue to use its scientific man years of staffing in a coordinating role for the maintenance of leadership in that part of the world-wide scientific community involved in genetic preservation. It expects to continue its extensive use of contract and short-term consultancies under which it maintains a high degree of flexibility and capability to respond to requirements on short notice.

#### 14.1 Cost Assumptions

IBPGR allocates its resources on the basis of programme elements. A programme element includes

- projected staff costs by smy
- -- support staff (including salaries and benefits) and
- operational costs.

These latter are the pro-rated share of non-programme or indirect costs (e.g. administrative and office operations, publications relevant to the programme and dissemination of information.

The allocation among programme elements is based on priorities determined by the Board and the Director so that elements of the Field Programme account for 40% of the budget, and elements of the strategic Research Programme account for 40%, the remainder dealing with administration, the Director's Office and technical services.

The allocation among sub-programme is determined by the Programme Committee in general outline with the Executive Committee providing a final review in a budget and finance role. The Director also retains authority at any time to make shifts in resources among sub programmes to a level of not more that \$50,000. Periodic review by the Programme Committee (3 times per year) permits modifications made necessary by unforeseen implementation delays, changes in emphasis, etc.

Of the 8 major operational programmes, 2 are given in-depth reviews and evaluation every year and future direction of the programme is determined. These are supplemented by continual staff monitoring and <u>ad hoc</u> evaluations by outside advisers when necessary.

The great diversity of the IBPCR operating in some 100 countries and the gap-filling nature of its work make formula budgeting not possible. For example, in the case of germplasm acquisition up to 60 projects may be operated annually ranging in structure from an excercise of a few days carried out by an IBPCR staff member and a local counterpart to a long-term contract with a national or international programme. In the case of contracted <u>in vitro</u> research, IBPCR may contract in any one of 20 countries each with its own level of staff remuneration, overhead costs and operational costs. As a third example research activities vary widely in cost depending on whether they are laboratory-based, just as collecting germplasm can vary in cost as much as six time depending on the part of the world from which it is collected.

The budget estimates therefore, must be based on a projected level of activity and costed in the light of past experience with similar ranges of activities. Another variable relates to changing exchange conversions and inflation rates in the many countries in which IBPCR operates. (By balancing exchange gains against inflationary costs the price changes from 1987 to 1988 were estimated at only 2%).

#### 14.2 Financial Requirements

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In 1988 IBPGR projects minimum requirements of \$5,966 million for core activities. Within this total are accommodated shifts in emphasis as outlined above. The increase in 1988 funding over 1987 (\$5.160 million) is largely accounted for by the addition of \$214,000 for professional posts previously funded by FAO and now absorbed into IBPGR funding. No similar major increase is expected during the next 5 years in any programme element.

Financial requirements are shown in Table 1 by and by input (i.e. scientific man-years and operational costs. Similar requirements are shown in Tables 2 and 2a broken down by functional components (e.g. personnel services, supplies and materials, etc.). No provision is made or necessary fo capital equipment. The IBPGR is headquartered in FAO in Rome, and all field staff are hosted by international or national centres at actual cost with no capital costs included.

Table 1 also shows total financial requirements for essential activities (both core and essential special projects) and additional desirable activities. These additional desirable activities are related to specific expansions in the global genetic resources network, <u>in vitro</u> culture research and genetic diversity research. They are explained in the respective discussions in this paper.

#### 14.3 Financing Plans

Currently IBPGR has 19 donors excluding IBRD, the donor of last resort. In the 1989s, the level of CGINR funding has been encouraging with 100% of the requirements met in 1986 and 1987.

Fortunately funding continues to be provided for the most part on an unrestricted basis, and IBPCR expects this to continue.

Special project funding is an integral part of IBPGR's programme and is appropriate when a piece of work has been defined as continuing, self-contained, and high priority. In 1987 the special projects represented about 9% of the budget and required 1 scientific man-year and operational costs. The Board expects this type of funding to increase by 1989 due to the increasing demand on IBPGR's services largely from client countries and the need to respond quickly.
With respect to additional funding for desirable activities, experience has enabled IBPGR to focus its proposals for expansion in the following specific areas: training (especially for bibliographic work), <u>in vitro</u> conservation, and genetic diversity research. By 1991 additional management strength will be necessary and additional programme planning and monitoring capability is projected.

IBPGR has not, as a matter of policy to date, agreed to propose high levels of desirable funding because its terms of reference include the mobilization of funding to centres from sources other than the CGIAR. It remains to be seen whether the world's research community responds to the possibilities and challenges of new technologies which impact on IBPGR research and it may be that, by 1989-90, IBPCR will have to re-assess this situation. Since IBPGR has an evolutionary responsibility to deal with fragile biological systems it would be failing in its duty if it allowed the world's research community not to grasp opportunities which arise.

The projections for desirable and special project funding are also, in part, limited because IBPGR is likely to experience some space constraints at Headquarters. FNO has specifically asked for advance warning of additional requirements and IBPGR must plan carefully in order to maintain a good working relationship with FNO, its host.

1987	1988	1989	1990	1991	1992	1993	
Scientist manyears	25.0	27.0	31.5	33.5	33.5	34.0	34.0
Operating requirements							
Essential Desirable Total	5,611 5,611	6,112 395 6,507	6,460 453 6,913	6,811 545 7,356	7,193 653 7,846	7,595 784 8,379	8,033 940 8,973
Price provision at 5% included in core requirements		280	298	313	328	345	363
Percent real increase in essential requirements	-	8.9	5.6	5.4	5.6	5.5	5.7
Annual growth % (essential + desirable)		15.9 <u>1</u> /	6.2	6.4	6.6	6.7	7.0
Projected special projects increased requirements		19.9	19.9	19.8	19.9	19.9	19.9
Total requirements							
Core Special projects Total	5,160 451 5,611	5,966 541 6,507	6,264 649 6,913	6,578 778 7,356	6,913 933 7,846	7,260 1,119 8,379	7,631 1,342 8,973

# Table 1. Summary of financial requirements 1987-1993

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1/ Includes absorption in 1987-88 of staff costs previously funded by FAO

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#### Table 2. Financial requirements by programme area (1987 \$ figures)

IBPGR Programmes	198	7	198	8	198	39	199	0	199	91	199	92	199	93	CGIAR
		\$		\$		\$		\$		\$		\$		\$	synonyms
	SMY1/0	00	SMY	000	SMY	000	SMY	000	SMY	000	SMY	000	SMY	000	
Administration &															
technical services	4.08	745	5.25	930	6.25	1,018	6.25	1,054	6.25	1,208	6.25	1,270	6.25	1,312	
Global genetic															Conservation, characterization
resources network	5.08	1,234	5.08	1,425	5.58	1,364	4.58	1,510	4.58	1,570	4.58	1,554	4.58	1,582	& evaluation
Germplasm acquisition	5.25	667	5.25	748	5.25	825	5.25	878	5.25	908	5.25	950	5.25	990	Collection
Characterization															Conservation, characterization
& evaluation	2.67	670	2.67	738	2.67	773	4.67	870	4.67	900	4.67	1,150	4.67	1,210	& evaluation
Training	1.08	610	1.08	650	2.08	730	3.08	770	3.08	830	3.08	910	3.08	1,010	Human resources development
Research on:															
In vitro conservation	1.75	700	2.00	782	3.00	871	3.00	902	3.00	975	3.25	985	3.25	1,030	
Genetic diversity	3.34	505	3.67	600	4.67	672	4.67	692	4.67	740	4.67	800	4.67	884	Research on conservation & diversity
Seed conservation	1.75	480	2.00	634	2.00	660	2.00	680	2.00	715	2.25	760	2.25	955	
Estimated requirements	(essentia	al and d	esirabl	e) again	st prog	ramme ca	tegorie	5							
Total	25.0	5,611	27.0	6,507	31.5	6,913	33.5	7,356	33.5	7,846	34.0	8,379	34.0	8,973	

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1/ Scientist manyears

	1987	1988	1989	1990	1991	1992	1993
Personnel services	1,680	1,950	2,067	2,170	2,306	2,494	2,693
Official duty travel	785	935	995	1,044	1,196	1,267	1,370
Contractual services	2,190	2,521	2,607	2,836	2,977	3,183	3,373
General operating expenses	260	280	308	323	338	349	373
Supplies and materials	255	285	365	383	397	420	450
Equipment	50	70	75	80	85	90	95
Fellowships	391	466	496	520	547	576	619
Total	5,611	6,507	6,913	7,356	7,846	8,379	8,973

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	1987	1988	1989	1990	1991	1992	1993
Core funded operations	5,160	5,966	6,264	6,578	6,913	7,260	7,631
Addition to working capital fund			50	50		25	25
Expected WCF balance (non-additive)	(150)	(120)	(160)	(180)	(170)	(190)	(200)
Earned interest	100	100	110	110	120	120	130
Total CGIAR funding requirement	5,060	5,866	6,154	6,468	6,793	7,140	7,501
Special project operations	451	541	649	778	933	1119	1342
Total requirements	5,511	6,407	6,803	7,246	7,726	8,259	8,843

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			SMY	3 Support staff <sup>b</sup>							Locally recruited scientists <sup>C</sup>											
87	88	89	90	91	92	93	86	87	88	89	90	91	92	93	86	87	88	89	90	91	92	93
4.08	5.25	6.25	6.25	6.25	6.25	6.25	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0								
5.08	5.08	5.58	4.58	4.58	4.58	4.58	6.0	7.0	8.0	8.0	10.0	10.0	10.0	10.0	-	1.0	2.0	3.0	4.0	4.0	4.0	4.0
5.25	5.25	5.25	5.25	5.25	5.25	5.25	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-
2.67	2.67	2.67	4.67	4.67	4.67	4.67	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0
1 08	1.08	2.08	3.08	3.08	3.08	3.08	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0								
1.00	1.00	2.00	5.00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,																		
													0.5	0.5								
1.75	2.00	3.00	3.00	3.00	3.25	3.25	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5								
3.34	3.67	4.67	4.67	4.67	4.67	4.67	-	-	0.5	0.5	0.5	0.5	0.5	0.5								
1.75	2.0	2.0	2.0	2.0	2.25	2.25	1	I	0.5	0.5	0.5	0.5	0.5	0.5								
	87 4.08 5.08 5.25 2.67 1.08 1.75 3.34 1.75	B7         B8           4.08         5.25           5.08         5.08           5.25         5.25           2.67         2.67           1.08         1.08           1.75         2.00           3.34         3.67           1.75         2.0	87         88         89           4.08         5.25         6.25           5.08         5.08         5.58           5.25         5.25         5.25           2.67         2.67         2.67           1.08         1.08         2.08           1.75         2.00         3.00           3.34         3.67         4.67           1.75         2.0         2.0	B7         88         89         90           4.08         5.25         6.25         6.25           5.08         5.08         5.58         4.58           5.25         5.25         5.25         5.25           2.67         2.67         2.67         4.67           1.08         1.08         2.08         3.00           3.34         3.67         4.67         4.67           1.75         2.0         2.0         2.0	B7         B8         B9         90         91           4.08         5.25         6.25         6.25         6.25           5.08         5.08         5.58         4.58         4.58           5.25         5.25         5.25         5.25         5.25           2.67         2.67         2.67         4.67         4.67           1.08         1.08         2.08         3.08         3.08           1.75         2.00         3.00         3.00         3.00           3.34         3.67         4.67         4.67         4.67           1.75         2.0         2.0         2.0         2.0         2.0	B7         B8         B9         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25           5.08         5.08         5.58         4.58         4.58         4.58           5.25         5.25         5.25         5.25         5.25         5.25           2.67         2.67         2.67         4.67         4.67         4.67           1.08         1.08         2.08         3.08         3.08         3.08         3.08           1.75         2.00         3.00         3.00         3.00         3.25         3.34         3.67         4.67         4.67         4.67           1.75         2.0         2.0         2.0         2.0         2.25         3.25	B7         B8         B9         90         91         92         93           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.25           5.08         5.08         5.58         4.58         4.58         4.58         4.58           5.25         5.25         5.25         5.25         5.25         5.25         5.25           2.67         2.67         2.67         4.67         4.67         4.67         4.67           1.08         1.08         2.08         3.08         3.08         3.08         3.08         3.08           1.75         2.00         3.00         3.00         3.00         3.25         3.25           3.34         3.67         4.67         4.67         4.67         4.67         4.67           1.75         2.0         2.0         2.0         2.0         2.0         2.25         2.25	B7         B8         B9         90         91         92         93         B6           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0           5.08         5.08         5.58         4.58         4.58         4.58         4.58         6.0           5.25         5.25         5.25         5.25         5.25         5.25         5.25         -           2.67         2.67         2.67         4.67         4.67         4.67         1.5           1.08         1.08         2.08         3.08         3.08         3.08         3.08         0.5           1.75         2.00         3.00         3.00         3.00         3.25         3.25         -           1.75         2.0         2.0         2.0         2.0         2.25         1	B7         B8         B9         90         91         92         93         B6         87           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0           5.08         5.26         6.25         6.25         6.25         6.25         4.0         4.0           5.08         5.08         5.58         4.58         4.58         4.58         4.58         6.0         7.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5           2.67         2.67         2.67         4.67         4.67         4.67         1.5         1.5           1.08         1.08         2.08         3.08         3.08         3.08         3.08         0.5         0.5           1.75         2.00         3.00         3.00         3.00         3.25         3.25         -         0.5           3.34         3.67         4.67         4.67         4.67         4.67         -         -           1.75         2.0         2.0         2.0         2.0         2.25         2.25         1         1	SMY <sup>A</sup> Support           87         88         89         90         91         92         93         86         87         88           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5           2.67         2.67         2.67         4.67         4.67         4.67         1.5         1.5         2.0           1.08         1.08         2.08         3.08         3.08         3.08         3.08         0.5         0.5           1.75         2.00         3.00         3.00         3.25         3.25         -         0.5         0.5           3.34         3.67         4.67         4.67         4.67         4.67         -         -         0.5           1.75         2.0         2.0         2.0         2.0         2.25         2.25         1         1         0.5	SMY <sup>4</sup> Support str           87         88         89         90         91         92         93         86         87         88         89           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0         8.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5           2.67         2.67         2.67         4.67         4.67         4.67         1.5         1.5         2.0         2.0           1.08         1.08         2.08         3.08         3.08         3.08         3.08         0.5         0.5         0.5           1.75         2.00         3.00         3.00         3.25         3.25         -         0.5         0.5         0.5           3.34         3.67         4.67         4.67         4.67         4.67         -         -         0.5         0.5           1.75         2.0         2.0         2.0	B7         B8         B9         90         91         92         93         B6         B7         B8         B9         90           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0           5.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0         8.0         10.0           5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5           2.67         2.67         2.67         4.67         4.67         4.67         1.5         1.5         2.0         2.0         2.0           1.08         1.08         2.08         3.08         3.08         3.08         3.08         0.5         0.5         0.5         0.5           1.75         2.00         3.00         3.00         3.00         3.25         3.25         -         0.5         0.5         0.5	B7         B8         B9         90         91         92         93         B6         B7         B8         B9         90         91           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0         5.0           5.08         5.08         5.98         4.58         4.58         4.58         6.0         7.0         8.0         8.0         10.0         10.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5           2.67         2.67         4.67         4.67         4.67         1.5         1.5         2.0         2.0         2.0         2.0           1.08         1.08         2.08         3.08         3.08         3.08         0.5	SMY <sup>®</sup> Support start <sup>№</sup> 87         88         89         90         91         92         93         B6         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0         5.0         5.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0         8.0         10.0         10.0         10.0           5.25         5.25         5.25         5.25         5.25         -         0.5	BT         B8         B9         90         91         92         93         B6         B7         B8         B9         90         91         92         93           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0	SMY         Support startf <sup>b</sup> Line           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0 </td <td>B7         B8         B9         90         91         92         93         B6         B7           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0         5.0         5.0         5.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5<td>B7         B8         B9         90         91         92         93         B6         B7         B8           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0</td><td>Support         Support         <t< td=""><td>SHY2         Support staft<sup>b</sup>         Locally recruited scienti           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0</td><td>Support         support         startP         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         95         B6         87         88         89         90         91           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         5.0         <t< td=""><td>SMY2         Support start<sup>b</sup>         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0         2.0         3.0         4.0         4.0         4.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5</td></t<></td></t<></td></td>	B7         B8         B9         90         91         92         93         B6         B7           4.08         5.25         6.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0         5.0         5.0         5.0         5.0           5.08         5.08         5.58         4.58         4.58         4.58         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5 <td>B7         B8         B9         90         91         92         93         B6         B7         B8           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0</td> <td>Support         Support         <t< td=""><td>SHY2         Support staft<sup>b</sup>         Locally recruited scienti           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0</td><td>Support         support         startP         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         95         B6         87         88         89         90         91           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         5.0         <t< td=""><td>SMY2         Support start<sup>b</sup>         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0         2.0         3.0         4.0         4.0         4.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5</td></t<></td></t<></td>	B7         B8         B9         90         91         92         93         B6         B7         B8           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0	Support         Support <t< td=""><td>SHY2         Support staft<sup>b</sup>         Locally recruited scienti           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0</td><td>Support         support         startP         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         95         B6         87         88         89         90         91           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         5.0         <t< td=""><td>SMY2         Support start<sup>b</sup>         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0         2.0         3.0         4.0         4.0         4.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5</td></t<></td></t<>	SHY2         Support staft <sup>b</sup> Locally recruited scienti           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         4.0         5.0	Support         support         startP         Locally recruited scientists <sup>2</sup> 87         88         89         90         91         92         95         B6         87         88         89         90         91           4.08         5.25         6.25         6.25         6.25         6.25         4.0         4.0         5.0 <t< td=""><td>SMY2         Support start<sup>b</sup>         Locally recruited scientists<sup>2</sup>           87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0         2.0         3.0         4.0         4.0         4.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5</td></t<>	SMY2         Support start <sup>b</sup> Locally recruited scientists <sup>2</sup> 87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92         93         86         87         88         89         90         91         92           4.08         5.25         6.25         6.25         6.25         6.25         6.25         6.0         7.0         8.0         8.0         10.0         10.0         10.0         -         1.0         2.0         3.0         4.0         4.0         4.0           5.25         5.25         5.25         5.25         5.25         5.25         -         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5         0.5

a Internationally recruited

For headquarters & field offices
 Excluding those on contract research

Date:	September 2,1987
To:	Mr Belay Wegayehu, CSHRP, E-438
From:	Hennie Deboeck-De Zutter, CGR, n-531
Ext.:	48025
Subject:	Contribution from Ministry of Agriculture,
	Fisheries and Food, United Kingdom

1. I have been informed by Mr R.J. Boswell that on January 17,1985 the Ministry of Agriculture, Fisheries and Food arranged for a transfer of \$ 9,160 to the World Bank. The contribution is for the International Board for Plant Genetic Resources (IBPGR) which has an account at Banca Commerciale Italiana, Via delle Terme di Caracalla, 00100 Rome, Italy - Trust Fund No 9150.

(-12

2. It appears that IBPGR has not received the \$ 9,160 (see attached letter from Mr. R.J. Boswell). The funds are either in the World Bank account or they were transferred to FAO but have not been credited to IBPGR. The latter is possible as the beneficiary instructions on the order for foreign currency transfer (see copy attached) do not mention IBPGR as beneficiary and also do not specify the Trust Fund No. I would appreciate your looking into the matter and informing Mr R.J. Boswell on the outcome.

3. Thank you for your assistance in this matter.

Files d-21, g-12

# Ministry of Agriculture, Fisheries and Food



Government Buildings Epsom Road Guildford Surrey GU1 2LD

Telex 859251

Telephone Guildford (0483) 68121 ext 3443

	Your reference	
The Chief Executive		
World Bank	Our reference	
1818 High Street	FAF 10531	
N W WASHINGTON DC	Date	
USA	6 August 1987	

Dear Sir

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH FAO/UN - SPECIAL PROJECT FUNDS FOR ECP/GR

I am seeking to establish the whereabouts of 9,160 Dollars which were paid into your bank ostensibly for the credit of the above account. Rather belatedly I have learned that according to the beneficiary this money has not been received.

Enquiries have been made of the Bank of England who arranged for the transfer of this money though Barclays Bank in the UK. The latter moved the money to your bank via Riggs National Bank Washington on 17 January 1985 and according to the information I have, the credit appears to have been made to, and I quote from a cable, "IFO INTL BK FOR RECONSTRUCTION AND DEVELOPMENT F/O CONSULTATIVE GROUP".

On the evidence of the foregoing it would seem that the credit has been mis-directed therefore I would appreciate corrective action on your part to ensure that the beneficiary named in the attached order is credited with the 9,160 Dollars.

I appreciate that the error would appear to have arisen in the transfer stages of this operation and that your actions may well have been in accordance with the instructions given to you, hence the enclosure showing our original instructions to the Bank of England.

You may appreciate that the beneficiary is anxious to receive this money and for our part this Ministry would appreciate an early settlement of this problem.

Yours faithfully

R J BOSWELL Accounts Branch

Enc

The Principal		FROM	MINISTRY	OF AGRICULT	URE FISHERIES AND FOO
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Dear Sir,	BOORX				
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(a) Currency Amount (in figure	(S) US \$37. 100.00	ONE U	WDDDD ANT		
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					· · · · · · · · · · · · · · · · · · ·
(b) Name of Bank (if any)	WORLD BANK				
(address)	1818 H STREET	NW WAS	SHINGTON D	C	
OR					
Giro A/C No. (if any)					
(c) Beneficiary's Bank A/C No	(if any)				
Name CONSU	JLTATIVE GROUP ON I	NTERNI	ATIONAL AC	RICULTURAL F	ESFARCH
(address) FC	OD AND AGRICULTURE	ORGA	TZATION C	E SE UNTTER	NATIONS
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(d) Particulars to be	ACRICUTURE LOND			NON MER GR	ROM MINIOIRI
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*(f) Payment of cost will	WRITE OFF				
be made by means of					
OR *(g) Please debit	Acco	ount No.		W	with the cost
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September 2, 1987

Dr. J. Trevor Williams Director, IBPGR Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Dear Dr. Williams:

As announced in my letter of August 25, and at the request of Guy Camus, I am sending you the report from the World Bank's study and seminar on research in agriculture in Eastern and Southern Africa.

Regards,

Max Rives

File G-12

מיעידי מדורדמא דראיד

September 2, 1987

Dr. J. Trevor Williams Director, IBPGR Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Dear Dr. Williams:

Please find enclosed the prospectus for the 16th International Grassland Congress, that is to take place in Nice, France, 4-11 October, 1988.

While there is no special agenda item specifically addressing the developing world, except that it is explicitely aiming at the Mediterranean environments, it is clear from the list of proposed topics and issues, that many of these can be of interest for scientists from the CGIAR and other Centers.

The organizer is a colleague and friend of mine, currently Chairman of the Congress. He expressed to me the wish that I help him to "mobilize a number of Africans, usually absent from these congresses": this obviously aims equally at the CG.

Regards,

Max Rives

Enclosure

1772

File G-12

FIHERBCG.LOF

August 25, 1987

Dr. J. Trevor Williams Director, IBPGR Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Dear Dr. Williams:

On behalf of Guy Camus, TAC Chairman and Chairman of the CGIAR Task Force on SubSaharan Africa, I am sending you a copy of the World Bank's

"West Africa Agricultural Research Review".

I hope to be able to do the same for the East Africa report as well in the near future.

Regards,

Max Rives

Enclosure

File G-12

MAIL IBPGR EX AR, SU 1987 JAPANESE CONTRIBUTION/EVL

DATE:	August 24, 1987
TO:	Dr. J. Trevor Williams, IBPGR
FROM:	Hennie Deboeck-De Zutter, CGIAR
SUBJECT:	1987 Japanese Contribution

AAA) HAVE BEEN INFORMED THAT CONTRIBUTION TO IBPGR AMOUNTS TO THOUSAND YEN 175,550. PLEASE LET US KNOW IF CONTRIBUTION IS UNRESTRICTED AND/OR RESTRICTED. IF RESTRICTED, PLEASE INDICATE AMOUNT AND FOR WHICH PROJECT.

BBB) JAPANESE HAVE ALSO INFORMED US THAT YOU SHOULD REQUEST PAYMENT OF CONTRIBUTION WHEREUPON THEY WILL INITIATE DISBURSEMENT.

THANKS AND REGARDS, HENNIE

.S .END

HDeboeck:ev1/File G12



q-12

## MAIL IBPGR CC CGIOO1 SU MESSAGE FOR TREVOR WILLIAMS

Dear Trevor,

I appreciate the personal compliment paid to Don Plucknett by your invitation to him to chair your in-house review. It comes, however, at a time when we are aware of considerable criticism of the CG secretariat for lack of clarity in its role. I would also, myself, be a bit unsure whether a science adviser in the secretariat should be considered as "independent" in the sense you use the term.

Accordingly, I think it would be better if we ask you to turn elsewhere for this important task.

I would, of course, have no problem with Don attending the review as an observer, if that is your wish.

Best regards,

Curtis Farrar

.s .end



To: C.FARRAR (CG1005) Cc: D.PLUCKNETT (CG1009) From: IBPGR (CG1101) Delivered: Fri 17-July-87 9:32 EDT Sys 157 (24) Subject: IBPGR in-House review Mail Id: IPM-157-870717-085880944

--More--

Dear Curt,

- We have agreed that the December 1987 In-House Review will focus on public relations so that our outposted field staff can help us devise the best possible linkages with our client countries. We have fixed the dates as 7 to 9 December in HQ in Rome.
- 2. Normally, IBPGR In-House Reviews are chaired by a Board member or an independent person. In this case we are fully of the opinion that the best person available would be Don Plucknett of the CGIAR Secretariat.
- 3. I mentioned this informally to Don in Nairobi, but need your concurrence. I'm sure, unless there is a clash in timing, you will also support this. We will be willing to pay the ticket and DSA at our normal rates.

Hope you've recovered from your extensive travel and fatigue from last month. I know all too well how you felt.

Yours,

#### Trevor Williams

AGP - PR 3/11 IBPGR Publications --More--

MAIL CGI019 ar su Patterson/ECF

TO: Trevor Williams, IBPGR FROM: R. Tadvalkar, CGIAR Secretariat DATE: July 22, 1987 SUBJECT: Glenn Patterson

Consultant has been found. Mr Glenn Patterson, ex USAID, at 4513 King Palm Drive, Tamarran, FL 33319 Phone (305)-731-3434. Have sent to him by courier following documents - IBPGR 1988 Budget, IBPGR Long term plan, Resource Allocation paper and copy of ISNAR document. Preliminary indications that two days may not be adequate however suggest you discuss directly with him.

Regards R. Tadvalkar

.s .end \IL IBPGR, EX AR SU CONSULTANT/ev1

DATE: July 20, 1987

TO: Dr. J. Trevor Williams, IBPGR

FROM: Ravi Tadvalkar, CGIAR

SUBJECT: Consultant

I have not forgotten IBPGR need for consultant. I am in process of tracking down someone who will be here in August. As you know, August is a typical summer month in Washington and it is taking a little while to find a consultant. Regards, Ravi

.S .END

RTadvalkar:ev1/File G12

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address—INTBAFRAD

#### From: The Secretariat

June 19, 1987

S-00

International Board for Plant Genetic Resources (IBPGR) \* \* \*

# Appointments to the Board of Trustees (NOTE: Responses requested by July 24,1987)

1. As a result of the circular dated December 8, 1986, the Group approved, on a no-objection basis, the nominations of two CGIAR nominees--Drs. Papasolomontos and Tossell to the IBPGR Board. The circular also stated that when the next two vacancies occurred at the end of 1987 the Group would be asked to replace the retiring board members (Drs. Fischbeck and Giacometti) with CGIAR nominees.

2. The Board has analyzed its current composition and its work program and has identified the mix of discipline, nationality and geographic expertise which it considers would be an ideal complement to the profile of the Board. Consequently, the Board seeks nominations of outstanding individuals from Latin America and Africa, preferably with experience in ecogeography, taxonomy, seed physiology or biotechnology/ molecular biology.

3. The Group is requested, therefore, to submit names of suitablyqualified people as CGIAR nominees for the two vacancies on the Board that will require filling by the end of 1987. The names of qualified people, accompanied whenever possible by their curriculum vitae, should reach the CG secretariat by July 24, 1987. When a CV is not available, a brief career summary is essential.

4. A list of the names and addresses of the current members of the IBPGR Board is attached for information.

5. As a separate matter, the term of the current chairman of the board, Dr. W. J. Peacock, ends on December 31, 1987. In the May 27, 1987 report of the Committee on the IBPGR which was circulated to the Group, the Committee supported the recommendation of the Board and the FAO that Dr. Peacock's term as Chairman be extended—on an exceptional basis—for one year. The extension of Dr. Peacock's term would coincide with the term of the agreement recently concluded between the FAO and the IBPGR. In the absence of objections by July 24 next, Dr. Peacock's term will be extended until December 31, 1988.

#### Distribution:

CGIAR Members TAC Chairman TAC Secretariat Chairman of IBPGR board Director of IBPGR

# INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES

#### Board Members 1987

Dr. W.J. Peacock (Chairman) Chief Division of Plant Industry CSIRO G.P.O. Box 2600 Canberra ACT 2601 AUSTRALIA (061)62-465250/PICAN AA62351/PLANTIND CANBERRA/

Brader, Dr. L. Director (<u>ex-officio</u> member) Plant Production and Protection Div. FAO Via delle Terme di Caracalla 00100 Rome . ITALY 57973359/610181 FAO I/FOODAGRI FAX. ROME/5146172 (GR.II/III)/

Chin, Prof. H.F. Prof. of Seed Technology Department of Agronomy Universiti Pertanian 43400 UPM Serdang, Selangor MALAYSIA 03-9486101/UNIPER 37454 MA

Fischbeck, Prof. G. Technische Universitat Munchen Lehrstuhl fur Pflanzenbau und Pflanzenzuchtung 805 Freising-Weihenstephan FEDERAL REPUBLIC OF GERMANY (08161)71422/-/PFLANZENBAU WEIHENSTEPHAN/ Cauderon, Mme. Y. Directeur de Recherche INRA Route de St. Cyr 78000 Versailles FRANCE 30.21.74.22/INRAVER 695269F/-/

Chopra, Prof.V.L. Head Biotechnology Center IARI Pusa Complex New Delhi 110012 INDIA 588783 or 5712887/316249 ICAR IN/ BIOTECH KRISHI PUSA

Giacometti, Dr. D.C. CENARGEN/EMBRAPA Avenida W-5, Norte Parque Rural CP 10.2372 70.770 Brasilia DF BRAZIL (061)2720253 or 2724203/ 061-1622/-/ Holden, Dr. J.H.W. The Steading, Yarrow, Selkirk, Scotland UK (044)750.82237/-/-/ Kikuchi, Prof. F. Professor of Plant Breeding Institute of Agriculture and Forestry, University of Tsukuba Sakuramura, Niiharigun Ibaraki-ken 305 JAPAN 0298(53)2111/3652580 UNTUKU J/ UNTUKU TSUCHIURA J/

Marshall, Prof. D.R. Agronomy Department Waite Agricultural Research Institute University of Adelaide Glen Osmond, SA 5046 AUSTRALIA 08-3722296/UNIVAD AA89141/-/ Murphy, Dr. C.F. National Program Leader Grain Crops USDA-ARS-NPS BARC-West Building 005, Room 239 Beltsville, MD 20705 USA (301)344.1560/258147 GERM UR/-/

Papasolomontos, Dr. A. (Vice Chairman) Minister of Agriculture Ministry of Agriculture & Natural Resources

Nicosia CYPRUS 40-2227/4660 MINAGRI CY/ MINAGRI, NICOSIA/ Tossell. Prof. W.E. Department of Crop Science Ontario\_Agricultural College University of Guelph Guelph, Ontario NIG 2W1 CANADA (519)824.4120/069-56645 UOFG INAT GLPH/20:UOG001/

Valmayor, Dr. R.V. Director General PCARRD - Philippine Council for Agric. and Resources Res. & Dev. Los Baños, Laguna 3732 PHILIPPINES 50014-19/4372 MANILA/ AGRESPHIL MANILA PHILIPPINES/ Williams, Prof. J.T. Director, IBPGR (<u>ex-officio</u> member) Plant Production and Protection Division FAO Via delle Terme di Caracalla 00100 Rome ITALY 57974772/610181 FAO I/FOODAGRI FAX. ROME/5146172 (GR.II/III)/57:CGI019

#### EMERITUS CHAIRMAN IBPGR

Demuth, Mr. R.H. 5404 Bradley Boulevard Bethesda, MD 20814 USA June 18, 1987

# g-12

#### Note for Doreen Calvo:

I think that we need to straighten out the Peacock situation. The report of the IBPGR committee says (I think, I have not checked) that the Group would be asked to extend Peacock"s term for a year, i.e. to the end of 1988. This needs to be accomplished in some form in the present circular, I think.

When the earlier circular went out, the two board members we had in mind were Giacometti and Peacock. Fishbeck has been persuaded to retire voluntarily so that there would be room to bring more developing country blood onto the board.

If Peacock is extended for a year, there may be a question whether he remains CGIAR member old style, or whether we count him as one of the four. This does not make much difference, but we should probably be clear about it.

I think that the African and Latin American sources are more important to the board at the moment than the disciplines, but I don't know if you can somehow make this apparant without being too gross about it. It is pretty formidable to find an African in the specialties listed.

Curtis Farrar

Attachment

willing to be on the IBRGR I can't remember. a Board (2 Don't recall, 2 Did not June 12, 1987

Doreen,

Re IBPGR

1. Re Fischbeck's term: he was appointed for a three-year term beginning January 1, 1985, which means that strictly speaking his term ends on December 31, 1987, but I suppose end of term could be considered as 1988. Why he is not being proposed for re-election does not appear to be documented.

2. The IBPGR Review suggested that the Board have at least three CGIAR nominees, as in the case of other Boards in the system. As a result of discussions between the IBPGR committee and the board, it was agreed that there would be four CGIAR nominees, two to be nominated last year and two this year.

3. We sent Tossell some Italian CVs. He is asking for Latin Americans or Africans with seed physiology/biotechnology/molecular biology backgrounds. I have done considerable searches in the computer and have only come up with three names: Silva, an unknown entity; Frang, already on ICARDA; and Magnavaca, already on CIMMYT. FARES

Please see above notes. Gratefu 4. Curtl il y could double check attached circular which has been delayed ecause inaccurate info from ad wanted which blue book "data attach as a regular, integral these circulars. I have checked I Sossell who agrees that part of chbeck & Gracomette who are Board not Kibuchi as indicated. He changed all nes again, when I had got agreethose Board members present va as to how they wanted to be , I intend to switch them back. (Hourfo. a 6200 6/17/87 is attached

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address—INTBAFRAD

May 27, 1987

G12.

From: The Secretariat

Committee Meeting on the IBPGR <u>Montpellier, France</u> May 19, 1987

The report of the meeting of the CGIAR committee on the IBPGR which was distributed in Montpellier contained typographical errors. A revised version is distributed herewith for your files.

Attachment

Distribution:

CG Members Center Board Chairmen Center Directors TAC Chairman TAC Members TAC Secretariat

May 21, 1987

#### Report of the CGIAR Committee on the IBPGR

Meeting at Montpellier, May 19, 1987

Present: Mr. Brady, Mr. Wessels, Mr. Muhammed. Absent: Mr. Husain, Mr. Caudron and Mr. McWilliam.

Others: Mr. Bonte-Friedheim, Mr. Farrar, Mr. Ozgediz, Mr. Williams.

Working in the absence of the chairman and of two members, but with a general knowledge of their views, the committee considered the agreement signed on February 27, 1987 by Mr. J. Peacock, chairman of the trustees of the IBPGR, and Mr. D. Walton, deputy director general of FAO. This agreement, which is attached, will govern relationships between the IBPGR and the FAO for a period through the end of 1988.

The agreement covers all of the major substantive issues related to constraints on IBPGR management which have concerned the Group. It was signed in an atmosphere of understanding which creates a favorable context for its implementation, and this atmosphere continues.

The committee learned from Mr. T. Williams that the IBPGR has moved its offices into new and more adequate space, and has initiated recruitment to fill all professional vacancies. An informal joint committee has been formed to deal with any issues that may arise. It is composed of the chairman of the IBPGR, Mr. Peacock, and a board member, Mr. Holden, and the assistant director general for agriculture of the FAO, Mr. Bonte-Friedheim, and the head of the relevant FAO division, Mr. Brader. Mr. Bonte-Friedheim agreed with Mr. Williams that no issues had arisen so far which appeared to threaten the implementation of the agreement.

The FAO has committed itself to continued financial support of the IBPGR. Three professional positions are transferred from the FAO to the IBPGR, which will increase its annual budget by about \$215,000. This transfer seems appropriate under the terms of the agreement.

The committee is very satisfied with the agreement and the progress reported in carrying it out. They are confident that the agreement can represent a basis for a mutually profitable long term relationship between the IBPGR and the FAO. The committee congratulates both organizations on this achievement.

/Continued...

Since, however, the agreement runs only to the end of next year, and will need to be renewed or amended in the light of experience, the committee agreed to the request of the chairman that it should remain in existence, subject to his call. A review of implementation will be made early in 1988 by which time the initial round of substantive actions, including recruitments, should have been completed, and recommendations can be made for a permanent agreement.

Mr. Peacock took up the chairmanship of the board at the beginning of 1987. He would normally leave the board at the end of the year, having served six years. Both the board of the IBPGR and the FAO recommend that he be extended as chairman on an exceptional basis for one year, that is for the life of the present agreement. The committee recommends that the Group approve this extention, which will be submitted in the normal manner for CGIAR nominated members of the IBPGR.

The committee noted that, although it was not the intention, the membership of the IBPGR board which has emerged from decisions made in full consultation with the committee, includes a relatively small number of developing country members. The committee agrees with the views of the board that this be corrected by new appointments as soon as possible.

Attachment: Agreement of February 27, 1987

#### MEMORANDUM OF UNDERSTANDING

# Arrangements for the Administration of the IBPGR

This Memorandum summarizes the agreement on steps to tackle outstanding administrative problems reached between the Food and Agriculture Organization of the United Nations (FAO) and the International Board for Plant Genetic Resources (IBPGR), in the course of exchanges of correspondence and discussions, and in particular during meetings in Rome between 23 and 26 February 1987.

The problems which have been encountered arise essentially from the difficulty of reconciling, on the one hand, the character of the IBPGR as an autonomous entity within the CGIAR system, and on the other hand, the constraints imposed by the fact that its staff are all FAO staff members, subject to the FAO Staff Regulations and Rules, and ultimately responsible to the Director-General. Substantial progress has been made in overcoming specific problems during the last few months. In particular, FAO has managed - despite its own problems of office space - to make available expanded accommodation for the IBPGR, thus enabling action to proceed on the recruitment of the additional staff authorized by the Board. Furthermore, FAO has agreed to apply to IBPGR-funded staff the more flexible procedures which govern the administration of extra-budgetary projects.

Nevertheless, a number of difficulties still remain, and the following additional understandings have been reached.

The IBPGR has offered to take over the funding of the three professional posts in its staff which are at present financed under the FAO Regular Programme. This offer has been accepted by FAO. All IBPGR professional staff will thus be on the same footing.

It is understood and agreed on both sides that the work programme of the IBPGR staff, on which they will all be engaged full time, is that defined by the Board. The Director of the IBPGR will be responsible to the Board for the implementation of this programme.

Administratively, the IBPGR Secretariat is appointed by FAO and is subject to the internal discipline and rules applying to FAO staff. The Director of the IBPGR Secretariat reports on administrative matters to the Director of the FAO Plant Production and Protection Division. Decisions on the recruitment and promotion of IBPGR staff, and on any other significant administrative issues, will be worked out jointly between FAO and the IBPGR. For this purpose, FAO will normally be represented by the Assistant Director-General, Agriculture Department, and/or the Director, Plant Production and Protection Division. The IBPGR will normally be represented by the Chairman and/or a member of the Board, together with the Director of the IBPGR staff. FAO will make every effort compatible with its internal rules and regulations to meet the requirements of the Board. IBPGR recommendations regarding levels of remuneration will be translated, as necessary, into FAO grade levels, taking account of the various allowances provided by FAO and other agencies of the United Nations common system. It is understood that, because of the need to preserve equity towards its staff as a whole, FAO has only limited discretion in fixing grade levels.

While FAO does not propose any formal limitation on the number of IBPGR staff covered by these arrangements, the Organization expects to have continuing problems of space for some years to come. Should the Board wish to consider a further major expansion of staff in Rome, the problem of accommodation should be discussed at an early stage.

The steps which are set out above are intended to reinforce the already close cooperation between the IBPGR and FAO on substantive activities in the field of plant genetic resources. The Director of the IBPGR will keep the Director of the FAO Plant Production and Protection Division closely informed in all phases of preparation and implementation of the work programme of the Board. Conversely, FAO will consult the Chairman and/or Director of the IBPGR closely insofar as FAO develops its own programme in this field. The objective of both parties will be to ensure full complementarity of action for the benefit of all countries, and in particular the developing nations.

The above arrangements are established on a trial basis from now to the end of 1988. IBPGR staff will be given fixed-term contracts up to 31 December 1988 unless a shorter period is requested by the Board, or unless their contracts already extend beyond that date. In order to ensure continuity a decision should be taken early in 1988 as to whether it is the mutual desire of the two parties to maintain the present relationship between FAO and the IBPGR, as supplemented by this agreement, or to seek an alternative solution.

Declan J. Walton Deputy Director-General Food & Agriculture Organization of the United Nations

James Peacock Chairman, Board of Trustees International Board for Plant Genetic Resources

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address - INTBAFRAD

April 23, 1987

To: CGIAR Committee on the IBPGR

From: Doreen Calvo

Subject: IBPGR board list

In Curtis Farrar's absence last week I issued a note on the IBPGR that contained, as an attachment, a list of the current members of the board, in which the name of the UNEP representative was inadvertently included. Dr. Williams has also provided us with an update on the addresses and titles of some of the board members. Therefore please replace the attachment to Curtis Farrar's letter of April 15 with the attached list.

Attachment

Distribution

Messrs. Brady, Caudron, Husain, McWilliam, Muhammed, Wessels cc: Bonte-Friedheim, Camus, Farrar, Peacock, Williams, Zandstra

# INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES (IBPGR)

## Board of Trustees

Dr. R. H. Demuth (Chairman Emeritus) 5404 Bradley Boulevard Bethesda, Maryland 20814 U.S.A. Phone: (202) 652-8439 (H)

Dr. W.J. Peacock (Chairman) Chief Division of Plant Industry CSIRO G.P.O. 2600 Canberra, ACT 2601 Australia Phone: (061) 62-465250 (0) Telex: PICAN AA 62351 Cable: PLANTIND CANBERRA

Prof. J. T. Williams Director, IBPGR Plant Production and Protection Division Agriculture Department Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy Phone 39-6-57974772 Telex: 610181 FAO I Cable: FOODAGRI ROME

Dr. Lukas Brader Director, AGP Plant Production and Protection Division Food and Agriculture Organization of the U.N. Via delle Terme di Caracalla Rome 00100, Italy

Dr. (Mrs) Yvonne Cauderon Directeur de Recherche INRA Route de St. Cyr 78000 Versailles France Phone: 30 21 74 22 (0) 39 54 26 34 (H) Telex: INRAVER 695269 F Prof. H.F. Chin Prof. of Seed Technology Department of Agronomy Universiti Pertanian 43300 UPM Serdang, Selangor Malaysia Phone: 355425 (0) Telex: UNIPER 37454

Dr. Virender Lal Chopra Head Biotechnology Centre Indian Agricultural Research Institute (IARI) Pusa Complex New Delhi 110012 India Phone: 588783 or 5712887 Telex: 3162442 PCO IN Cable: BIOTECH KRISHI PUSA

Prof. G. Fischbeck Technische Universitkt Munchen Lenhrstuhl fur Pflanzenbau 805 Freising-Weihenstephan Federal Republic of Germany Phone: (08161) 71422

Dr. D. C. Giacometti CENARGEN/EMPRAPA Avenida W-5 Norte Parque Rural C.P. 10.2372 70.770 Brasilia D.F., Brazil Phone: (061) 2720253/2724203 (0) (061) 1622 (H)

Dr. J.H.W. Holden The Steading Yarrow, Selkirk Scotland United Kingdom Phone: (044) 7508.2237 (0)

Prof. F. Kikuchi Professor of Plant Breeding Institute of Agriculture and Forestry University of Tsukuba Sakuramura, Niiharigun Ibaraki-ken 305 Japan Phone: 0298 (53) 2111 Telex: 3652580 UNTUKU Cable: UNTUKU TSUCHIURA J

- . 21 . .

Prof. D. R. Marshall Waite Agricultural Research Institute University of Adelaide Glen Osmond, SA 5046 Australia Telex UNIVAD AA 89141

Dr. C. F. Murphy National Program Staff USDA-ARS-NPS BARC-West Building 005, Room 239 Beltsville, Maryland 20705 U.S.A. Phone: (301) 344-1560

H.E. Dr. A. Papasolomontos Director General Ministry of Agriculture and Natural Resources Nicosia, Cyprus Phone: 40-2247 (0) Cable: 2270 LOUVRI CY MINAGRI, NICOSIA

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Prof. W. E. Tossell
Department of Crop Sciences
Ontario Agricultural College
University of Guelph
Guelph, Ontario
Canada NIG 2Wl
Phone: (519) 824-4120 ext.3476 (0)
(519) 824-2038 (H)
Telex: 0908087 INTL TORCA
Dialcom: 20: U0G001
```

Dr. R.V. Valmayor Director General Philippine Council for Agriculture and Resources Research and Development (PCARRD) P.O. Box 425 Los Banos, Laguna 3732 Philippines Phone: 50015 Telex: 40860 PARRS PM Cable: AGRESPHIL MANILA

April 1987

# MAIL IBPGR AR, SU 1987 ITALIAN CONTRIBUTION/evl

DATE: April 15, 1987 TO: Dr. J. Trevor Williams, IBPGR FROM: Hennie Deboeck-De Zutter, CGIAR SUBJECT: 1987 Italian Contribution

ALLOCATION OF CONTRIBUTION WAS INFORMALLY GIVEN TO SECRETARIAT. WOULD APPRECIATE YOUR NOT CONTACTING DONOR ON INFORMATION WHICH FOLLOWS: UNRESTRICTED CORE - LIRA 250 MILLION.

.S .END

evl/File G12/Disk 2 HDeboec



NO. AC 1400/1209

OFFICE OF THE NATIONAL FAD COMMITTEE

CF, DC

24 April B.E. 2530 (1987)

Dear Dr. Peacock,

The Office of the National FAO Committee has been in close collaboration with the FAO for the past 40 years. When the IBPGR planned to launch its Regional Programme in Southeast Asia, we were consulted and, consequently had provided assistance in several activities, including the official nomination of Thai representatives to the Regional Committee. When the Regional Office was moved from Bogor, Indonesia to the FAO/Regional Office for Asia and the Pacific in 1980, we were also consulted. During the past seven years, your Regional Office and our Office have enjoyed excellent working relationship between each other.

We have recently learnt that the IBPGR has decided to close down its Regional Office in Bangkok. We are sorry to inform you of our great dissatisfaction on your decision, as we were never notified of such a move by the IBPGR. This definitely does not do any honour to our country. May we be enlightened as to why the Board is taking this decision. If there is anything wrong on our part, kindly let us know so that we can correct the situation to improve our relations.

2/....

Dr. W.J. Peacock, Chairman IBPGR Chief, Division of Plant Industry CSIRO, G.P.O. Box 2600 Canberra ACT 2601, Australia I trust the Board's decision is not irreversible. I hope that you will make every effort to retain the office in Bangkok. After all, Thailand has always been an excellent IBPGR cooperator. It will, I can assure you, continue to give whatever support we can to the IBPGR in its endeavour in the years to come.

Sincerely yours,

Muychai Salyachivin

Mr. Auychai Salyachevin Secretary General

cc: Chairman, CGIAR, Washington, D.C. Director General, FAO, Rome ADG/RR, FAO/RAPA, Bangkok Chairman, FAO Commission on Plant Genetic Resources, Rome Chairman, TAC, Rome Members IBPGR Members IBPGR/RECSEA Dr. Narong Chomchalow, FAO/RAPA, Bangkok

- 2 -

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address - INTBAFRAD

## April 15, 1987

To:	CGIAR Committee on the IBPGR	
From:	Curtis Farrar NT-98	

Subject: Additional items for the Meeting at Montpellier

1. You may have noted that the IBPGR has been removed from the Group's agenda for the Montpellier meeting. There seems to be a general feeling in the IBPGR and the FAO that further discussion now would be pointless. There is very little to discuss, since the agreement signed in February covers all of the important points at issue. The best means of encouraging the parties seems to be to leave them to work out the details in private.

2. I suggest that when the committee meets at Montpellier, it approve a brief report transmitting the signed agreement to the Group, and indicating that it intends to keep an eye on the situation. In particular, the Committee should make an appraisal of progress early in 1988 by which time most of the major personnel actions now in train should have been completed, and the operating relationships fallen into place. An appraisal will be required at that time, since the agreement is for two years, so that a decision will need to be made fairly early in 1988 whether to continue or make some other arrangements from January 1989. The report would be circulated at Montpellier and could be discussed if the members find it necessary under "other business."

3. Mr. James Peacock's term on the board would normally come to an end at the end of this year, and a vacancy for chairman of the IBPGR would occur. The board's nominating committee has secured his agreement to continue for one more year, and has recommended, with the concurrence of the Deputy Director General of FAO, that his term be extended. There are two principal reasons for this suggestion: first, that Mr. Peacock having negotiated the agreement with the FAO on behalf of IBPGR is well placed to supervise its implementation; second, that with eight new members having joined in 1987, (out of twelve members--other than ex officio members) it would be well to postpone a change in the chairmanship until the new board members have somewhat greater experience of the organization.

4. Mr. Husain was persuaded by these arguments, and agreed to put the proposal to the committee with his support. Agreement by the committee and by the CGIAR is necessary, since it had been anticipated that Mr. Peacock would have been replaced by a new CGIAR nominee.

Attachment

#### Distribution

5. The present list of members of the IBPGR is attached for information. In addition to Mr. Peacock, Mr. Giacometti is scheduled to leave the board in December 1987. The relatively small representation of developing country members is a matter of concern which should be remedied as soon as possible.

6. The agenda for our meeting on May 19 would consist of two items:

a. Extension of Mr. Peacock's term.

b. Approval of report to the CGIAR.

.

7. We shall meet at five pm for not more than an hour, in Room A at the Congress Center, Frantel-Mairie.

#### INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES (IBPGR)

Board of Trustees

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Dr. J. Trevor Williams Director, IBPGR Plant Production and Protection Division Agriculture Department Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy Phone 39-6-57974772 Telex: 610181 FAO I Cable: FOODAGRI ROME

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Mrs. Yvonne Cauderon Head of Cytogenetics Laboratory Plant Breeding Department Centre de Recherche Route de St. Cry 78000 Versailles France Phone: 30 21 72 22 (0) 39 54 26 34 (H) Telex: INRAVER 695269 F

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Professor Gerhard Fischbeck Technische Universitkt Munchen Lenhrstuhl fur Pflanzenbau und Pflanzenzuchtung der TU Muchen 8050 Freising - Weihenstephan Federal Republic of Germany Phone: (08161) 71422

Dr. Dalmo C. Giacometti CENARGEN/EMPRAPA Avenida W-5 Norte Parque Rural C.P. 10.2372 CEP 70.000 Brasilia D.F., Brazil Phone: (061) 1622

Dr. J.H. Holden Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Professor F. Kikuchi Institute of Agriculture and Forestry University of Tsukuba Sakuramura, Niiharigun Ibaraki-ken Japan 305 Telex: 3652580 UNTUKUJ

..2/..
Dr. D. Marshall University of Sydney Wheat Research Centre P.O. Box 219 Narrabri, NSW 2390 Australia

Dr. Charles Murphy USDA, Agricultural Research Service Beltsville Agricultural Research Center Room 239, Bldg. 005 Beltsville, Maryland 20705, U.S.A. Phone: (301) 3341560 (0)

Prof. Reuben Olembo Director Environmental Management Service UNEP P.O. Box 30552 Nairobi, Kenya Telex: 22068 Cable: UITERRA NAIROBI

Dr. Andreas Papasolomontos Ministry of Agriculture and Natural Resources Nicosia, Cyprus Phone: 402247/21376 (0) Dr. William E. Tossell Department of Crop Sciences University of Guelph Guelph, Ontario, Canada NIG 2W1 Phone: (519)824-4120 ext.3476 (0) (519)824-2038 (H) Telex: 069-566455 Dialcom: 20: U0G001

Dr. Ramon dela Vina Valmayor Executive Director Philippine Council for Agriculture and Resources Research and Development (PCARRD) P.O. Box 425 Los Banos, Laguna, Philippines

Cable: AGRESPHIL MANILA

April 1987

To: CGI001 (57:CGI001) From: DR.TOSSELL (U0G001) Posted: Fri 27-Mar-87 16:37 EST Sys 20 (8) Subject: Message for Doreen Calvo

Curt Farrar at Rome last week said there should be someone from Italy on the IBPGR Board as one of the two CGIAR nominees to fill one of the two vacancies for January 1988. He had two names. Please send the names and addresses to me along with any information you have on them. If you have no information on file I will ask Trevor Williams to collect it. Best regards. Tossell.

Disposition: de

End of Mail.

wit: live there MONTI = and BRANDOLINI = need to react in a 4 may have written a, Pcan't find. apologias

#### March 12, 1987

To: CGIAR Committee on the IBPGR

From: Curtis Farrar

Subject: IBPGR/FAO agreement

I am sending herewith a copy of an agreement signed on February 27, 1987 by Jim Peacock as chairman of the IBPGR trustees, and Declan Walton, Deputy Director General, on behalf of the FAO, which will govern relationships between the two for a period through the end of 1988.

This agreement appears to deal with all of the major substantive issues relating to constraints on IBPGR management which have concerned the Group, and was signed in an atmosphere of good understanding which creates a favorable context for implementation.

One implication is an increase in the annual budget of the IBPGR of approximately \$215,000 per year, resulting from the transfer of three professional positions from the FAO. This seems acceptable, and is much less than the additional costs being contemplated earlier.

I suggest that the committee hold a short meeting on the afternoon of May 19 at Montpellier, with participation from the FAO and the IBPGR. The agenda would be to review the situation, discuss particularly what steps should be planned for judging the success of the arrangement prior to its expiry, and prepare a brief report to the Group, transmitting the agreement. We will advise of the exact time and place of the meeting later on.

Please let me know as soon as you can whether you agree to the course of action, and will be able to participate in the meeting.

#### Attachment

#### Distribution

Messrs. Bonte-Friedheim, Brady, Camus, Caudron, Husain, Kahre, McWilliam, Muhammed, Wessels, Williams, Zandstra

blind copies for Forget, please, and for Humphries with following note.

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address—INTBAFRAD

March 12, 1987

G12.

Mr. Declan J. Walton Food & Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy

Dear Mr. Walton:

I was delighted to receive your letter of February 27, with a copy of the agreement between the FAO and the IBPGR. It will be a real pleasure for me to bring it to the attention of the CGIAR at our meeting in Montpellier in May.

As you say, the time when we must think about action to follow the two year term of the agreement is not far off. Let us hope that implementation in 1987 will provide a basis for continuing.

I should like to express my thanks to you and your colleagues in the FAO for having found a way through a situation which I know has not been easy.

With very best regards,

Sincerely yours,

apri s. Shahid Husain

Chairman

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address—INTBAFRAD

March 12, 1987

Dr. Amartya K. Sen All Souls College Oxford University Oxford, OX1 4 AL England

Dear Dr. Sen:

Pursuing our determination to get your intellectual contribution to the thinking of the CGIAR, I am now coming to you with an opportunity which does not require the continued effort of TAC membership, but would be a chance for a real contribution to our work.

The Australian Government has financed a lectureship to be given annually at the CGIAR meeting in Washington in memory of Sir John. This gives us an opportunity to honor one of the founders of the Group, and to call upon major figures in science and development to challenge the CGIAR on the substance and direction of its work.

Robert McNamara gave the first lecture in 1985. He got us off to a fine start. The second lecture by Bukar Shaib turned out to be a routine recitation of the accomplishments of one of the centers, not at all what we had in mind. We would therefore look to you to get us back on the right track. For example, you might want to look at our priority statements to see whether you think we are being too narrow in our approach, or resting on past accomplishments. The whole issue of support from developing countries to the centers is of special interest to me, since it is obvious that sooner or later the foreign aid donors will tire of the course and want to hand over responsibility to users.

The choice of subject would be entirely up to you. We believe the Crawford lecture should focus the audience's attention on issues relating to agricultural research and, particularly, to those that are of specific concern to the CGIAR.

There is the sum of about \$US 3,500 available for an honorarium or research assistance in preparing the talk. The CGIAR secretariat would be prepared to help in any way they can with materials or information you might require.

/Continued...

S-0016

Dr. Amartya K. Sen

March 12, 1987

- 2 -

We would, of course, provide travel and expenses to Washington, and would publish and distribute the talk afterwards. While the exact schedule of centers week has not been established, perhaps the best time would be the early evening of October 26.

I hope you will be able to accept. If you should like to talk it over, please give me a call.

Sincerely yours,

mafin Husain S. Sha id

Chairman

Enclosure: CGIAR Annual Report for 1985

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address — INTBAFRAD

March 12, 1987

612

To: CGIAR Committee on the IBPGR

From: Curtis Farrer

Subject: IBPGR/FAO agreement

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This agreement appears to deal with all of the major substantive issues relating to constraints on IBPGR management which have concerned the Group, and was signed in an atmosphere of good understanding which creates a favorable context for implementation.

One implication is an increase in the annual budget of the IBPGR of approximately \$215,000 per year, resulting from the transfer of three professional positions from the FAO. This seems acceptable, and is much less than the additional costs being contemplated earlier.

I suggest that the committee hold a short meeting on the afternoon of May 19 at Montpellier, with participation from the FAO and the IBPGR. The agenda would be to review the situation, discuss particularly what steps should be planned for judging the success of the arrangement prior to its expiry, and prepare a brief report to the Group, transmitting the agreement. We will advise of the exact time and place of the meeting later on.

Please let me know as soon as you can whether you agree to the course of action, and will be able to participate in the meeting.

Attachment

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#### MEMORANDUM OF UNDERSTANDING

#### Arrangements for the Administration of the IBPGR

This Memorandum summarizes the agreement on steps to tackle outstanding administrative problems reached between the Food and Agriculture Organization of the United Nations (FAO) and the International Board for Plant Genetic Resources (IBPGR), in the course of exchanges of correspondence and discussions, and in particular during meetings in Rome between 23 and 26 February 1987.

The problems which have been encountered arise essentially from the difficulty of reconciling, on the one hand, the character of the IBPGR as an autonomous entity within the CGIAR system, and on the other hand, the constraints imposed by the fact that its staff are all FAO staff members, subject to the FAO Staff Regulations and Rules, and ultimately responsible to the Director-General. Substantial progress has been made in overcoming specific problems during the last few months. In particular, FAO has managed - despite its own problems of office space - to make available expanded accommodation for the IBPGR, thus enabling action to proceed on the recruitment of the additional staff authorized by the Board. Furthermore, FAO has agreed to apply to IBPGR-funded staff the more flexible procedures which govern the administration of extra-budgetary projects.

Nevertheless, a number of difficulties still remain, and the following additional understandings have been reached.

The IBPGR has offered to take over the funding of the three professional posts in its staff which are at present financed under the FAO Regular Programme. This offer has been accepted by FAO. All IBPGR professional staff will thus be on the same footing.

It is understood and agreed on both sides that the work programme of the IBPGR staff, on which they will all be engaged full time, is that defined by the Board. The Director of the IBPGR will be responsible to the Board for the implementation of this programme.

Administratively, the IBPGR Secretariat is appointed by FAO and is subject to the internal discipline and rules applying to FAO staff. The Director of the IBPGR Secretariat reports on administrative matters to the Director of the FAO Plant Production and Protection Division. Decisions on the recruitment and promotion of IBPGR staff, and on any other significant administrative issues, will be worked out jointly between FAO and the IBPGR. For this purpose, FAO will normally be represented by the Assistant Director-General, Agriculture Department, and/or the Director, Plant Production and Protection Division. The IBPGR will normally be represented by the Chairman and/or a member of the Board, together with the Director of the IBPGR staff. FAO will make every effort compatible with its internal rules and regulations to meet the requirements of the Board. IBPGR recommendations regarding levels of remuneration will be translated, as necessary, into FAO grade levels, taking account of the various allowances provided by FAO and other agencies of the United Nations common system. It is understood that, because of the need to preserve equity towards its staff as a whole, FAO has only limited discretion in fixing grade levels.

While FAO does not propose any formal limitation on the number of IBPGR staff covered by these arrangements, the Organization expects to have continuing problems of space for some years to come. Should the Board wish to consider a further major expansion of staff in Rome, the problem of accommodation should be discussed at an early stage.

The steps which are set out above are intended to reinforce the already close cooperation between the IBPGR and FAO on substantive activities in the field of plant genetic resources. The Director of the IBPGR will keep the Director of the FAO Plant Production and Protection Division closely informed in all phases of preparation and implementation of the work programme of the Board. Conversely, FAO will consult the Chairman and/or Director of the IBPGR closely insofar as FAO develops its own programme in this field. The objective of both parties will be to ensure full complementarity of action for the benefit of all countries, and in particular the developing nations.

The above arrangements are established on a trial basis from now to the end of 1988. IBPGR staff will be given fixed-term contracts up to 31 December 1988 unless a shorter period is requested by the Board, or unless their contracts already extend beyond that date. In order to ensure continuity a decision should be taken early in 1988 as to whether it is the mutual desire of the two parties to maintain the present relationship between FAO and the IBPGR, as supplemented by this agreement, or to seek an alternative solution.

Declan J. Walton Deputy Director-General Food & Agriculture Organization of the United Nations

Year

James Peacock Chairman, Board of Trustees International Board for Plant Genetic Resources

March 12, 1987

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With very best regards,

Sincerely yours,

S. Shahid Husain Chairman

CFarrar/ms/CF51/G12

March 12, 1987

18/64

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- 2 -

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Declan J. Walton Deputy Director-General Food & Agriculture Organization of the United Nations

James Peacock Chairman, Board of Trustees International Board for Plant Genetic Resources

27 February 1987

Via delle Terme di Caracalia, 00100-ROME Cebles: FOODAGRI ROME Telex: 610181 FAO I Telephone: 57973117/8

The Deputy Director-General

27 February 1987

Dear Mr. Husain,

I am glad to say that we have reached an agreement on the administrative problems of the IBPGR. Attached is a copy of the Memorandum of Understanding signed today by the Chairman of the IBPGR Board and myself.

As you will see from the last paragraph, the new arrangements are being tried out during the period running up to the end of next year. However, a decision on whether to confirm them or seek an alternative solution will need to be taken early in 1988 in order to avoid the danger of a hiatus.

As important as the arrangements themselves will be the spirit in which they are carried out. I am glad to say that we finally arrived at a very good understanding which augurs well.

With best personal regards,

Yours sincerely,

Dockan Walt

Declan J. Walton

Mr. S. Shahid Husain Chairman Consultative Group on International Agricultural Research (CGIAR) 1818 H. Street N.W. WASHINGTON, D.C. 20433

# Consultative Group on International Agricultural Research



# International Board for Plant Genetic Resources

Headquarters Crop Genetic Resources Centre (AGPG) Plant Production and Protection Division Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy Cables: Foodagri Rome Telex: 610181 FAO I Telephone: 57971

25 February 1987

Dear Mr. Walton,

Thank you for your letter of 24 February 1987, indicating that FAO would wish the IBPGR to remain closely associated with FAO and proposing arrangements for the administration of IBPGR to enable such association to be continued, at least on a transitional basis, on a mutually agreeable basis. You have requested my reaction to your letter.

Let me say at the outset that I appreciate greatly the frank and generous spirit in which our discussions have been conducted and that I fully share your view that IBPGR should, if possible, retain its headquarters at the headquarters of FAO and that it should continue to operate its programme in close cooperation with, and with the administrative support of, FAO. While I am in general agreement with your letter, I do have some reservations about portions of it which I set forth below. My reservations, as you will see, are not major in nature. However, I would like to be in a position to recommend to my Board of Trustees, and to the CGIAR, an agreement with FAO which I support wholeheartedly and without reservation. To this end, I would request you to consider writing me a second letter, embodying the revisions suggested below, which I could then respond to on behalf of IBPGR by simply stating my full agreement with your proposals. I would also state that in my opinion the proposals meet all the points raised by Mr. Husain in his letter to the Director General in February 1986.

1. My first reservation is, I believe, purely semantic. I believe the expression in the third paragraph on page 1 of your letter that IBPGR would carry out its activities "within the framework" of FAO is apt to be misinterpreted as suggesting that IBPGR is organizationally part of FAO. I believe a different phrase, which was used during our discussions, namely "with the administrative support of FAO", would be less contentious and more compatible with IBPGR's status as an autonomous entity operating under

.../...

Mr. Declan J. Walton Deputy Director-General FAO Rome

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International Board for Plant Genetic Resources



- 2 -

the auspices of the CGIAR. We would also have no objection to use of the phrase "under the umbrella of FAO", a phrase used by a number of CGIAR donors to describe the relationship which they hoped would be developed between us.

2. A more important point relates to the final paragraph on page 2 of your letter. I would hope you could expand that paragraph to include a recognition by FAO that the IBPGR is an autonomous entity with full authority over its substantive activities and its funds subject only to such control as the CGIAR may wish to exercise and the administrative constraints imposed by the FAO Staff Regulations and Staff Rules to which we recognize our staff must conform as FAO employees.

Another important point relates to the staff matters covered by the 3. first paragraph on page 3 of your letter. First, we would suggest that this paragraph be expanded to state that all IBPGR staff will work fulltime for the IBPGR. They will be responsible to their Director, who in turn has line responsibility only to the IBPGR Board of Trustees. There will no longer be any dual responsibility but we recognize that IBPGR will be administered as a field project of FAO. Second, if you agree, we would suggest that provision be made for all IBPGR staff to be given fixed-term 'FAO contracts extending at least to December 31, 1988 except where a shorter period is requested by the Board. Third, we believe a statement should be included that the size of the IBPGR staff will be determined by the Board of Trustees and that the salaries of the staff will also be determined by the Board or the Director, provided, as stated in your letter, that "they were compatible with the Staff Rules and Regulations". Finally, with regard to the proposal for a joint FAO/IBPGR Administration Committee, a proposal which I welcome, we believe that the provision in your letter that, if agreement on a particular problem cannot be reached by the Joint Committee it will be referred to the FAO Director General for final decision, is unnecessary, since we have both agreed that such instances are very unlikely to occur and would not be likely to be of such importance as to require the attention of the Director General. Moreover, the sentence may well irritate sensibilities since it may be interpreted (although I know it is not so intended) as an indirect way for FAO to achieve control over IBPGR. If you find it difficult to delete the sentence entirely, I suggest it be reworded to state that, if the Committee cannot resolve a particular administrative problem, the matter will be referred for discussion to the Director General and the Chairman of the CGIAR, it being understood that, if agreement on the administrative problem is still unattainable, final decision rests with the Director General.



- 3 -

4. I believe it would be desirable for your letter to include a separate paragraph accepting the IBPGR's offer to reimburse FAO from the IBPGR Trust Fund for the IBPGR professional staff whose salaries are now funded by FAO.

5. We request that the trial period for the new arrangements become effective immediately and extend to December 31, 1988. This will give needed stability to the staff and is in accordance with the wishes of the CGIAR.

I would not wish to end this letter without expressing my appreciation for your agreement to promote the IBPGR Director and to consider sympathetically proposals by the IBPGR to increase the salaries of meritorious employees who, for one reason or another, may not be eligible for grade promotion.

I hope that you will find the foregoing suggestions useful and acceptable.

Yours sincerel Fearoch

W(/James Peacock Chairman IBPGR Board of Trustees

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Via delle Terme di Caracelle, 00100-ROME Cebles: FOODAGRI ROME Telex: 610181 FAO I Telephone: 57973117/8

The Deputy Director-General

24 February 1987

Dear Dr. Peacock,

I was very glad to have an opportunity of discussing fully and frankly with you and Mr. Demuth the problems that have arisen in the relationships between FAO and the IBPGR.

In particular, I was pleased to note from our conversations that there are no disagreements on substance between the two sides. Indeed, the issues relate exclusively to the administration and management of the IBPGR staff.

We are all, I think, agreed that the most desirable solution would be the maintenance of an arrangement similar to that which now prevails, with the IBPGR continuing to carry out its activities within the framework of FAO. This would be the least costly solution for the taxpayer, and also the most effective arrangement for ensuring coordination and complementarity between the work programmes of the Board and FAO.

The alternative would appear to involve a physical separation between FAO and the IBPGR. Before this is seriously contemplated, I believe we should both look at the advantages (as well as the constraints) inherent in the present system.

So far as FAO is concerned, we have been very happy with the close association between the FAO and IBPGR programmes in the area of plant genetic resources. Indeed, we have drawn virtually no distinction over the years between what the Board did and what we did: in most cases, projects were ascribed to the IBPGR even if there was an FAO input. Rather than programmes in the plural, there has been a single programme for plant genetic resources.

Dr. James Peacock Chairman Board of Trustees IBPGR Rome

From the IBPGR point of view, you have free accommodation from

FAO, and all services in the administrative and financial field. In addition the Secretariat of the Board, being FAO staff members, benefit from the full range of privileges and immunities available for officials of the UN specialized agencies, and from those accorded by the Italian Government under the FAO Headquarters Agreement. They are members of the UN Pension Fund. They can be freely transferred to and from FAO. The field activities of the IBPGR are covered by the agreements reached by FAO with individual countries.

Under the aegis of the senior Review Committee established to look into the specific problems of the IBPGR, we have made substantial progress in meeting your requirements. The difficulty of office space has, I believe, been resolved. Most, though not all, of the Board's requests for personnel action have been satisfied.

Greater flexibility in terms of FAO's internal procedures has become possible following the decision to handle IBPGR-funded activities (including staff matters) on the same basis as a field project. We cannot apply these same procedures to staff financed under the FAO Regular Programme, but I welcome your suggestion that the IBPGR might be able to take over the funding of the Regular Programme posts concerned. If this is confirmed, it would release an equivalent amount of resources for our Regular Programme, to be devoted to building up our activities in the general field of plant genetic resources, and would place all staff members of the IBPGR on the same footing.

There is, of course, a price to be paid for the facilities provided by FAO to the Board. The price consists in the fact that, being FAO staff, the members of the IBPGR Secretariat are administratively responsible to the Director-General. This is not merely a constitutional matter, it is also an issue of considerable practical importance. All staff of the Organization are administered under the FAO Staff Regulations and Staff Rules, any breach of which can lead to an appeal by the staff member concerned. To such an appeal it is the Director-General of FAO who is obliged to respond, and it is the Organization which must pay damages in case an indemnity is awarded.

It is therefore not possible for FAO to hand over total responsibility for the administration of the IBPGR staff to the IBPGR Board of Trustees.

We could, however, envisage the following arrangements, at least on a transitional basis.

The programme of work of the Secretariat would continue as at present to be defined by the Board.

The Board (or its Chairman) would make recommendations to FAO regarding the recruitment, promotion and assignment of staff members funded by the IBPGR. FAO for its part would normally accept these recommendations provided they were compatible with the Staff Regulations and Rules. In order to handle the inter-action between IBPGR and FAO in this area, I suggest that a Joint FAO/IBPGR Administration Committee be instituted. This would consist of one or two members of the Board representing the IBPGR, and the Assistant Director-General, Agriculture Department and/or the Director, Plant Production and Protection Division representing FAO. The Executive Secretary of the IBPGR would normally attend the meetings. These would be held as often as necessary, and possibly several times a year. If agreement on a particular problem could not be reached in the Joint Committee, it would be referred to the Director-General, who would take the final decision.

These arrangements could be given a trial period of (say) a year. If, in the course of the next twelve months, it appears that they are not satisfactory, then I believe there will be no alternative to a start being made on the physical separation between FAO and IBPGR. In this case, FAO will certainly do all it can to help the Board in finding a satisfactory alternative solution, including the development of new arrangements to maintain the close cooperation and complementarity of action that exists at present.

I look forward to your reaction.

Yours sincerely,

Declan Walt

Declan J. Walton

#### MEMORANDUM OF UNDERSTANDING

#### Arrangements for the Administration of the IBPGR

This Memorandum summarizes the agreement on steps to tackle outstanding administrative problems reached between the Food and Agriculture Organization of the United Nations (FAO) and the International Board for Plant Genetic Resources (IBPGR), in the course of exchanges of correspondence and discussions, and in particular during meetings in Rome between 23 and 26 February 1987.

The problems which have been encountered arise essentially from the difficulty of reconciling, on the one hand, the character of the IBPGR as an autonomous entity within the CGIAR system, and on the other hand, the constraints imposed by the fact that its staff are all FAO staff members, subject to the FAO Staff Regulations and Rules, and ultimately responsible to the Director-General. Substantial progress has been made in overcoming specific problems during the last few months. In particular, FAO has managed - despite its own problems of office space - to make available expanded accommodation for the IBPGR, thus enabling action to proceed on the recruitment of the additional staff authorized by the Board. Furthermore, FAO has agreed to apply to IBPGR-funded staff the more flexible procedures which govern the administration of extra-budgetary projects.

Nevertheless, a number of difficulties still remain, and the following additional understandings have been reached.

The IBPGR has offered to take over the funding of the three professional posts in its staff which are at present financed under the FAO Regular Programme. This offer has been accepted by FAO. All IBPGR professional staff will thus be on the same footing.

It is understood and agreed on both sides that the work programme of the IBPGR staff, on which they will all be engaged full time, is that defined by the Board. The Director of the IBPGR will be responsible to the Board for the implementation of this programme.

Administratively, the IBPGR Secretariat is appointed by FAO and is subject to the internal discipline and rules applying to FAO staff. The Director of the IBPGR Secretariat reports on administrative matters to the Director of the FAO Plant Production and Protection Division.

Decisions on the recruitment and promotion of IBPGR staff, and on any other significant administrative issues, will be worked out jointly between FAO and the IBPGR. For this purpose, FAO will normally be represented by the Assistant Director-General, Agriculture Department, and/or the Director, Plant Production and Protection Division. The IBPGR will normally be represented by the Chairman and/or a member of the Board, together with the Director of the IBPGR staff. FAO will make every effort compatible with its internal rules and regulations to meet the requirements of the Board. IBPGR recommendations regarding levels of remuneration will be translated, as necessary, into FAO grade levels, taking account of the various allowances provided by FAO and other agencies of the United Nations common system. It is understood that, because of the need to preserve equity towards its staff as a whole, FAO has only limited discretion in fixing grade levels.

While FAO does not propose any formal limitation on the number of IBPGR staff covered by these arrangements, the Organization expects to have continuing problems of space for some years to come. Should the Board wish to consider a further major expansion of staff in Rome, the problem of accommodation should be discussed at an early stage.

The steps which are set out above are intended to reinforce the already close cooperation between the IBPGR and FAO on substantive activities in the field of plant genetic resources. The Director of the IBPGR will keep the Director of the FAO Plant Production and Protection Division closely informed in all phases of preparation and implementation of the work programme of the Board. Conversely, FAO will consult the Chairman and/or Director of the IBPGR closely insofar as FAO develops its own programme in this field. The objective of both parties will be to ensure full complementarity of action for the benefit of all countries, and in particular the developing nations.

The above arrangements are established on a trial basis from now to the end of 1988. IBPGR staff will be given fixed-term contracts up to 31 December 1988 unless a shorter period is requested by the Board, or unless their contracts already extend beyond that date. In order to ensure continuity a decision should be taken early in 1988 as to whether it is the mutual desire of the two parties to maintain the present relationship between FAO and the IBPGR, as supplemented by this agreement, or to seek an alternative solution.

(sgd) DECLAN J. WALTON (sgd) W. James Pearock

Declan J. Walton Deputy Director-General Food & Agriculture Organization of the United Nations

James Peacock Chairman, Board of Trustees International Board for Plant Genetic Resources

27 February 1987

#### FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100-ROME Cables: FOODAGRI ROME Telex: 610181 FAO I Telephone: 57973117/8

The Deputy Director-General

27 February 1987

Dear Mr. Husain,

I am glad to say that we have reached an agreement on the administrative problems of the IBPGR. Attached is a copy of the Memorandum of Understanding signed today by the Chairman of the IBPGR Board and myself.

As you will see from the last paragraph, the new arrangements are being tried out during the period running up to the end of next year. However, a decision on whether to confirm them or seek an alternative solution will need to be taken early in 1988 in order to avoid the danger of a hiatus.

As important as the arrangements themselves will be the spirit in which they are carried out. I am glad to say that we finally arrived at a very good understanding which augurs well.

With best personal regards,

Yours sincerely,

Declan W

Declan J. Walton

Mr. S. Shahid Husain Chairman Consultative Group on International Agricultural Research (CGIAR) 1818 H. Street N.W. WASHINGTON, D.C. 20433

#### MEMORANDUM OF UNDERSTANDING

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This Memorandum summarizes the agreement on steps to tackle outstanding administrative problems reached between the Food and Agriculture Organization of the United Nations (FAO) and the International Board for Plant Genetic Resources (IBPGR), in the course of exchanges of correspondence and discussions, and in particular during meetings in Rome between 23 and 26 February 1987.

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Declan J. Walton Deputy Director-General Food & Agriculture Organization of the United Nations

James Peacock Chairman, Board of Trustees International Board for Plant Genetic Resources

27 February 1987

To: CINMYT (CGI201) Cc: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Wed 25-Feb-87 4:20 EST Sys 57 (24) G-72 D. Winkelmann, DG 27 7 7 Subject: Meetings

To: D. Winkelmann, DG From: J.T. Williams Re. Committee Meetings

Don: IBPGR's Programme Committee and Executive Committee have just revilioRvwed the Field Programme staffing structure. To the present our Field Officer for Latin America, supported by a Collector currently located at CATIE and another at CIP is headquartered at CIAT. This has been a fine and useful arrangement. Nonetheless the IBPGR Board wishes to see that IBPGR efforts are re-oriented to put higher emphasis on Mexico and Meso America. This means moving our regional office and they have asked me to explore the willingness of CIMMYT to host an IBPGR staff member who would thereby be exposed to the peer scientific environment of an International Center.

In essence we pay salary, costs of local secretary, any costs CIMMYT would incur such as telephone, cables etc. and a staff vehicle. It requires minimum office space. Would CIMMYT be favourable to this? We expect our person (not the current incumbent at CIAT who is returning to Peru) to set up base around September 1987.

Look forward to your reply. Best personal regards.

Trevor Williams AGP PR 3/11 IBPGR MesoAmerica

612

MAIL IBPGR ar su Urgent message for Dr. Williams To: Dr. Trevor Williams, IBPGR From: Curtis Farrar, CGR Date: February 24, 1987 Delighted with news and look forward to specifics whenever available. Shahid will be in Washington from February 25. Regards Curt .s .end To: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Tue 24-Feb-87 3:38 EST Sys 57 (10) Subject: IBPGR To: Curtis Farrar, CGIAR From: J.T. Williams Re. IBPGR

Dick Demuth and I join in informing you that Jim Peacock, new Chairman of IBPGR, has exercised to quote a recent CGIAR phrase "diplomatic adroitness". Too early to provide any feed-back. Discussions continuing this week. Is Shahid in town if ANYONE needs to discuss. Please reply asap. Greetings. Trevor

AGP PR 3/11 IBPGR General

MAIL IBPGR AR SU BELGIAN 1986/ev1

DATE: February 20, 1987

TO: Dr. J. Trevor Williams, IBPGR

FROM: Hennie Deboeck-De Zutter, CGIAR

SUBJECT: 1986 Belgian Contribution

I HAVE BEEN INFORMED BY BELGIAN GOVERNMENT THAT ITS 1986 CONTRIBUTION TO IBPGR WILL AMOUNT TO BFR 5.0 MILLION. THE DISBURSEMENT PROCESS HAS BEEN INITIATED AND DISBURSEMENT IS EXPECTED FOR MARCH 1986. BELGIUM WILL FORMALLY COMMUNICATE THIS INFORMATION TO YOU. REGARDS, HENNIE

.S .END

HDeboeck-De Zutter:ev1/File G12

#### Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address INTBAFRAD

February 20, 1987

-012

Dr. J. Trevor Williams Director, IBPGR Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Dear Trevor:

Further to my letter of February 19, I am writing with regard to the 1987 inflation rate IBPGR has proposed in its 1987 funding requirements request to donors.

In view of the fact that inflation rates have lowered during 1985 and 1986 it would be useful for the system to reflect this change in its planning assumptions. The secretariat recommends that IBPGR adjust its 1987 inflation rate downwards to take into account a reduction in the OECD inflation rate which centers are applying for their US\$ expenditures, from 5% to 2.5%, and a comparable appropriate reduction in the inflation rate related to local expenditures. IBPGR's proposed 1987 inflation rate and the secretariat's recommended rate are shown in the attachment.

Centers' acceptance of the inflation rates recommended by the secretariat would translate in a systemwide full funding of the budgeted program levels. It would result in the full funding of all centers' programs, with one exception. Centers' acceptance of the proposed rates would not result in a downwards revision of the 1987 level of core funding which the secretariat guaranteed in its funding letter of February 19. We are proposing to maintain the level of 1987 core funding or to increase that level, where necessary, to bring all centers (except one) to the full funding level.

In IBPGR's case, the acceptance of the secretariat's proposed inflation rates by all centers would result in maintaining 1987 estimated core funding at \$5.1 million.

The impact of the adoption of the proposed inflation rates by all centers would be a reduction of the stabilization claims to be processed in November. Some centers would also share in 1987 exchange gains up to the point that their programs are fully funded.

I would appreciate receiving as soon as possible your reactions to our proposal. I will subsequently be in touch with you to inform you of the outcome.

With best regards,

Sincerely yours,

Curtis Farrar Executive Secretary

# Attachment

	Comparative Price Increases by Center			
	1984	1985	1986	1987
	Actual	Actual	Estimate	Estimate
CIAT CIMMYT CIP IBPGR ICARDA ICRISAT IFPRI IITA ILCA ILRAD IRRI ISNAR WARDA	4% 9% 7%% 8%% 8%% 8%% 8%% 8%% 8%% 8%% 8%% 8%	42 62 -37 97 48 87 107 88 57	47 57 177 77 9% 47 87 10% 67 17%	47 77 57 77 37 47 57 57 57 67 67 67 57
Total	6.5%	5.8%	5.6%	5.8%

# Composition of 1987 Inflation Rates Proposed by Centers

	Expenditures Composition		Inflation		Total
Center	Local	US\$	Local	US\$	Inflation
CIAT CIMMYT CIP IBPGR ICARDA ICRISAT IFPRI IITA ILCA ILRAD IRRI ISNAR WARDA	61% 50% 33% 75% 39% 63% 10% 66% 57% 60% 48%	39% 50% 67% 25% 61% 37% 90% 34% 43% 40% 52% 40% 100%	3.4% 9.0% 7.7% 3.4% 5.0% 9.6% 13.8% 6.7% 7.1% 6.7%	55555555555555555555555555555555555555	4 % 7 % 5 % 7 % 3 % 4 % 5 % 10 % 6 % 6 % 6 % 5 %
m 1					5.8%

Total

# CGIAR Secretariat's Recommended Inflation Rates

	Expenditures	Composition	Infla	tion	Total
Center	Local	US\$	Local	US\$	Inflation
CIAT CIMMYT CIP IBPGR ICARDA ICRISAT IFPRI IITA ILCA ILRAD IRRI ISNAR WARDA	61% 50% 33% 75% 39% 63% 10% 66% 57% 60% 48%	39% 50% 67% 25% 61% 37% 90% 34% 43% 40% 52% 40% 100%	3.4% 5.0% 5.0% 5.0% 3.4% 5.0% 5.0% 5.0% 5.0% 5.0% 5.0%	2.5% 2.5% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55% 2.55%	3% 4% 3% 4% 2% 3% 3% 4% 4% 4% 3% 3%
Total					3%

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address INTBAFRAD

### February 19, 1987

Dr. J. Trevor Williams Director, IBPGR Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla Rome 00100, Italy

Dear Trevor:

Further to our electronic mail message of November 26, I am writing to provide more complete information on the funding IBPGR is likely to receive from the members of the CGIAR for approved core operating and capital budgets in 1987. Since November, we have received additional information from Canada, Germany, Spain, the UK and USAID. The World Bank has disbursed its first tranche. We have delayed sending you this letter until we received the confirmed allocations from USAID. The following paragraphs elaborate on requirements, World Bank funding policy, IBPGR's 1987 estimated funding and the stabilization mechanism.

#### I. Requirements

As approved by the Group during ICW 1986, IBPGR's 1987 requirements amount to \$5.1 million. The recommended budget includes IBPGR's proposed rate of cost increases of 7%.

# II. World Bank Funding Policy

The World Bank will continue the practice of using its funds to bring all centers to the same ratio of funding versus approvals, subject to the limitation of 25% of the 1987 recommended requirements. At present the systemwide funding outlook is \$190 million. Planning targets for the centers have been set at \$188 million. Approved funding requirements are \$193 million<sup>1</sup>/. This translates in a systemwide average funding level of 97% of the 1987 approvals of \$193 million. The disbursement policy has been designed to provide maximum funding as early as possible. As in the past two years, the first tranche has been disbursed in January; the second disbursement is scheduled for November 1987.

<sup>1/</sup> The Group approved a program of work requiring \$196 million funding at ICW. At present, support for the programs approved by the Group will require about \$3 million less. This is mainly due to the devaluation of the Naira in Nigeria, resulting in about \$4 million cost reduction. However, the latter should be offset by cost increases of about \$1 million in Peru.

#### III. Funding

Based on the secretariat's current funding outlook it appears that IBPGR will be funded at \$5.1 million. This translates into the full funding of the requirements approved by the Group. This funding estimate is the starting point for IBPGR's 1988 Program and Budget Proposal to TAC. If you have any questions regarding this estimate or any additional information, please inform us as soon as possible so that the estimate can be adjusted if necessary.

Of the \$5.1 million the secretariat guarantees IBPGR will receive in 1987, \$3.28 million has been confirmed by donors. The attachment gives you the details of these confirmed contributions. We are regularly following up on the donors who have not yet allocated their 1987 contributions and will inform you of their decisions as the information flows in. The donors who are in this situation are: Austria, Belgium, China, Finland, France, IFAD, India, Ireland, Italy, Japan, Mexico, Nigeria, Norway, OPEC, Philippines and the World Bank (2nd tranche). As you know, not all of these donors will contribute to IBPGR.

With regard to Japan, as the representative of this country indicated during ICW, the systemwide contribution to the CGIAR might be slightly less than in 1986 when it was US\$15.6 million. According to the latest information we received from the Japanese, the FY87 budget plan has not yet been approved by the DIET. Therefore, Japan is not in a position to make a formal commitment until their budgetary process ends on March 31.

With regard to Italy we have learned that, due to the change in government, the budgetary process is running behind by about four months as compared to 1986. The actual disbursement of funds is, therefore, likely to be later than last year.

#### IV. Stabilization Mechanism

The mechanism will operate much the same in 1987 as it did in 1986. Centers who expect to have a claim on the mechanism are requested to keep us regularly informed during the year. During ICW 1987 the secretariat will discuss with the centers the claims on the mechanism and payments will be made in November. Payments will be made only if the total claim for any center exceeds one percent of the funding requirements.

The scope of expenditures covered by the mechanism has been expanded. Late in 1986, the secretariat decided to include capital costs as an item for which stabilization payments can be made provided that:

(a) specific cost assumptions (including exchange rates) and the scope of the project have been explicitly discussed with the secretariat at an early enough stage;

(b) centers have taken all possible steps including currency hedges when cost elements are exposed to risk.

We shall also wish to discuss hedging with any center which has significant exchange risk in its expenditure pattern. Centers in this category are encouraged to initiate discussion with us as soon as possible.

Inflation. We project that for most centers the actual inflation rate will be lower than the one originally proposed by the centers in their 1987 funding requirements request to donors. We are taking up this matter in a separate communication which will follow this letter.

Exchange Variations. The mechanism guarantees exchange rates for all donors who are pledging in non-dollar currencies. The applicable exchange rate is the one as of November 4, 1986, when donors made their pledges. Since then the dollar has weakened against the non-dollar currencies and there is the likelihood that this trend might continue in 1987. Consequently, the stabilization mechanism will have claims on a number of centers.

As in the past, it is the secretariat's intention not to press stabilization claims if they would bring a center below the average rate of funding for the system.

With best regards,

Sincerely yours, Curtis Farrar

Executive Secretary

Attachment

DONOR	CURRENCY	PLEDGED <u>1</u> / CONTRIBUTION	EXCHANGE RATE AS OF 11/4/86	US DOLLAR EQUIVALENT
		(IN MILLIONS)		(IN MILLIONS)
AUSTRALIA	AUS \$	.23	1.56	.15
CANADA	CAN \$	. 50	1.39	.36
DENMARK	DKR	.93	7.74	.12
GERMANY	DM	.45	2.06	.22
NETHERLANDS	DFL	.95	2.32	.41
SPAIN	US \$	.05	1.00	.05
SWEDEN	SKR	2.20 2/	7.02	. 31
SWITZERLAND	SFR	.28	1.71	.16
UK	POUND	. 50	.71	.70
USA	US \$	.80	1.00	.80
TOTAL				3.28
				====

# IBPGR - 1987 Core Funding Update (as of February 10, 1987)

 $\frac{1}{2}$  Contributions are unrestricted core.  $\frac{2}{2}$  Funds will be available in January but will be disbursed only upon center's request.

MAIL IBPGR AR EX SU RAVI/evl

DATE: February 19, 1987

TO: Dr. J. Trevor Williams and Mr. N. Murthi Anishetty, IBPGR

FROM: Ravi Tadvalkar, CGIAR

SUBJECT: IBPGR Committee Meetings

I will arrive in Rome on Saturday, February 21, and stay at Sheraton Roma. I will be available for any discussions on Sunday, February 22, prior to the meeting.

Regards, Ravi

.S .END

RTadvalkar:ev1/File G12
MAIL IBPGR AR SU MEETINGS/evl

DATE: February 3, 1987

TO: Dr. J. Trevor Williams, IBPGR

FROM: Ravi Tadvalkar, CGIAR

SUBJECT: IBPGR Committee Meetings

With reference to recent conversation between Farrar and Anishetty I have made plans to attend the program and executive committee meetings of IBPGR on February 23 and 24, 1987. Main focus will be on IBPGR medium-term program plan proposal using the new process for discussion with TAC at the March 87 TAC meeting. Would be grateful for your concurrence and provision of documentation. Regards, Ravi

.S .END

cc and cleared with CF

cc: DC, HD, SO, DP

RTadvalkar:ev1/File G12

FORM NO. 27 - OCR (3/82)

# WORLD BANK OUTGOING MESSAGE FORM Cable, Telex IMPORTANT—PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM

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'	THEREFORE ACCEPT THIS INFORMAL C	OMMUNICATION AS A TEMPORARY
8	SUBSTITUTE AND DO MAKE PLANS TO	PARTICIPATE IN THE BOARD MEETING
9	IN ROME FEBRUARY 25-27, DETAILS	OF WHICH ARE COMING TO YOU
10	DIRECTLY FROM THE SECRETARY OF T	HE BOARD, N. MURTHI ANISHETTY.
31-	BBB. MANY THANKS FOR YOUR WILLI	NGNESS TO UNDERTAKE THIS
12	RESPONSIBILITY FOR THE BENEFIT O	F THE CGIAR. AND BEST REGARDS,
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To: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Tue 3-Feb-87 9:39 EST Sys 57 (30) Subject: Ownership of germplasm

To: C. Farrar From: J.T. Williams Re. Ownership of germplasm

A the present the situation is that the Boards of Trustees of CGIAR are the l dal owners. I have tried to get a consensus statement - without much effect - from the Centers, minuted by the Boards that de facto they act in this capacity as international custodians of material to be made available to all "bona fide users who can use it for the benefit of mankind".

212

ur problem with the cosponsors is their organizations' interpretations of international law. There are wide disparities. So too are the FAO legal interpretation and these of international lawyers of the US.

Hence I feel evantually that the CGIAR collectively should make a statement as above, but it would have to be cleared by the government lawyers.

If full and ready agreement of the cosponsors on international status is anything to go by (!) I would play this issue low key. You could well start getting adverse press which will do nothing to resolve the issue, if indeed there is an issue other than in the minds of a few.

Relations with Italy

Ms. Salerno is visiting us for full discussions before the Board meeting. Her 'phone has been OK since 2 February.

Regards

Trevor Williams

612 file

To: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Fri 28-Nov-86 10:53 EST Sys 57 (23) Subject: IBPGR/FAO Meeting

DECLASSIFIED

MAIL CGI005 SU'IBPGR FAO MEETING'

MAY 1 5 2023

To: Curt Farrar From: J.T. Williams (CGI019)

# WBG ARCHIVES

CONFIDENTIAL TO BE MENTIONED ONLY TO SHAHID HUSSAIN AND GENERAL OUTLINE TO CG COMMITTEE

I expect FAO has already contacted you but, IF NOT, this is the state of affairs.

1. Bonte agreed with Kahre in Washington for a meeting on 8 and 9 Dec. and confirmed it by telephone.

2. This week it appears Walton will not be available 8 and 9 but could make 10 Dec. at 3 pm. Only Demuth of the 3 Chairmen could make that time. Kahre has a long-standing appointment for his medical checks after his illness a few years ago and Peacock is only available 8-9 and 21-22 Dec. before the Board meeting in Feb.

3. I attempted everything trying to get a meeting on Sunday evening, at breakfast time or in the evenings but to no avail. FAO now cancels the meeting and will open discussions during IBPGR Board meetings 19-23 Feb. 1987.

4. I have informed the 3 Chairmen and cancelled all arrangements. Trevor Williams

FORM NO. 27 - OCR (3/82)

## WORLD BANK OUTGOING MESSAGE FORM Cable, Telex IMPORTANT—PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM

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4	AUSTRALIA				
5	MESSAGE TO JIM PEACOCK, COPY TO TREVOR WILLIAMS				
6	HAVE RECEIVED INVITATION FROM MURTHI TO YOUR BOARD ME	ETING IN			
7	ROME FEBRUARY 25-27. BELIEVE THIS IS ALSO THE OCCASI	ON YOU WILL			
8	BE MEETING WITH WALTON TO RESOLVE REMAINING MANAGEMEN	T ISSUES FOR			
9	TWO YEAR TRIAL PERIOD. THINK IT IMPORTANT THAT THE L	ATTER			
10	DISCUSSION BE STRICTLY BETWEEN IBPGR AND FAO. SECRET	ARIAT WILL			
11	NOT BE REPRESENTED AT THE BOARD MEETING UNLESS YOU SE	E A			
12	PARTICULAR NEED. I ASSUME THAT DISCUSSIONS OFD TWO N	ONINATIONS			
13	FOR NEXT YEAR CAN BE HANDLED THROUGH OTHER CHANNELS,	AND PERHAPS			
14	SOREWHAT LATER IN THE TEAK. WOULD APPRECIATE TOUR VI	C 11 3 .			
15	REGARDS AND HAPPT HEN TEAK, PARKAR				
16					
17					
19					
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END OF					
22 TEXT					
	PINK AREA TO BE LEFT BLANK AT ALL TIMES				
	INFORMATION BELOW NOT TO BE TRANSMITTED				
	CLASS OF SERVICE: TELEX NO.: DATE:				
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RCA4564 248423 WORLDBANK EQYWWRO ICAR IN MSG NO. 15 DATED 13/1/87

THE SECRETARIAT CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH 1818 H STREET, N.W. WASHINGTON D.C. 20433. U.S.A. C/O WORLD BANK. WASHINGTON D.C.

NO. 12(1)/87-ICI (.) SUBJECT TO FINAL CLEARANCE OF GOVT. ICAR NOMINATES DR. N.V. RAO, SPECIAL SECRETARY, DEPTT. OF AGRICULTURAL RESEARCH AND EDUCATION AT THE HEADQUARTERS OF INDIAN COUNCIL OF AGRICULTURAL RESEARCH NEW DELHI AS THE CANDIDATE FOR MEMBERSHIP OF THE BOARD OF TRUSTEES OF THE INTERNATIONAL RICE RESEARCH INSTITUTE FOR THE SECOND TERM(.)

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## MAIL CGI101 SU IBPGR MEMBERSHIP CC CGI005

To: Murthi Anishetty From: Curtis Farrar, CGIAR Secretariat

The list of names of new members in your PR 3/11 of today corresponds with that of the circular to the Group dated December 8, 1986. Two of these, Drs. Papasolomontos and Tossell, are proposed as CGIAR nominees. Formal notification of approval will be sent as soon as possible after January 20, the date for Group members to comment as specified in the circular. The remaining six are the names that were agreed in Washington between the IBPGR Executive Committee and the CGIAR Committee on the IBPGR.

3

Thus we seem to be on the same wavelength. You should probably address Papasolomontos and Tossell as "prospective" board members until formal Group approval later this month.

Happy new year.

Sent 1/1/87

c Doreen Calvo

To: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Tue 6-Jan-87 9:09 EST Sys 57 (18) Subject: 'IBPGR MEMBERSHIP'

To: C. Farrar From: Murthi Anishetty, Board Secretary (CGI101) Re: IBPGR Membership

As you know the next meeting of the Board of Trustees of IBPGR is scheduled 25-27 February 1987. We are in the process of sending documents to members (old and new). Appreciate if you could confirm that following are new members as approved by CG: Messrs. H.F. Chin (Malaysia); J.H.W. Holden (UK); D.R. Marshall (Australia); A. Papasolo-Montos (Cyprus); C.F. Murphy (USA); V.L. Chopra (India); W. Tossell (Canada); and Mme. Y. Cauderon (France). The other members are Messrs. L. Brader (FAO); G. Fischbeck (FR Germany); D.C. Giacometti (Brazil); F. Kikuchi (Japan); W.J. Peacock (Australia); and J.T. Williams (IBPGR).

I would appreciate your early action.

AGP PR 3/11 IBPGR Membership

Consultative Group on International Agricultural Research

Mailing Address: 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. Office Location: 1825 K Street, N.W. Telephone (Area Code 202) 334-8021 Cable Address—INTBAFRAD

From: The Secretariat

December 8, 1986

International Board for Plant Genetic Resources (IBPGR) \* \* \*

Appointments to the Board of Trustees (NOTE: Responses requested by January 20, 1987)

<u>Summary</u>: Actions by the IBPGR on board vacancies are reported. Two CGIAR nominations are proposed to be considered approved unless objections are received by January 20, 1987.

1. A circular was issued to the Group dated June 26, 1986, requesting that the Group submit names of suitably qualified people as CGIAR nominees for eight vacancies on the IBPGR that will occur at the beginning of 1987. The board was to consider the names submitted by the Group for all eight vacancies and originally intended to request the Group to approve four of these names as CGIAR nominees, with the remaining four to be appointed as at-large members. As a result of discussions with the IBPGR committee chaired by the chairman of the CGIAR, the board appointed six at-large members and the Group will be asked to approve the nominations of two CGIAR nominees at this time. When the next vacancies occur at the end of 1987 the Group will be asked to replace two retiring board members with CGIAR nominees.

2. The board has appointed, as its new Chairman, Dr. William J. Peacock, whose term of office expires in December 1987. Remaining members of the board are Dr. D. Giacometti, whose term also expires in 1987, and Drs. G. Fischbeck, F. Kikuchi and R. Valmayor, whose terms extend through 1988 (not 1987 as stated in previous secretariat documents).

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S-0016

#### Distribution:

CGIAR Members TAC Chairman TAC Secretariat Chairman of IBPGR Director of IBPGR The board has elected six new at-large members as follow:

2 -

Yvonne Cauderon	USA	Cytogenetics	
H.F. Chin	Malaysia	Seed Physiology	
V. Chopra	India	Geneticist	
J. Holden	U.K.	Plant genetic resources specialist	
D. Marshall	Australia	Population Genetics	
C. Murphy	USA	Plant Genetics	

These at-large members have been appointed for a 3-year term to the board beginning January 1, 1987.

4. Dr. A. Papasomontos and Dr. W. Tossell have been suggested as CGIAR nominees. The C.V.s for Drs. Papasomontos and Tossell are attached. Drs. Papasolomontos and Tossell would also be appointed for a 3-year term beginning in January 1987.

5. Members of the Group are requested to approve these nominations. In the absence of objections by **January 20, 1987,** the board will be informed of the Group's agreement.

6. A list of the current members of the IBPGR is attached for information.

Attachments

3.



# **Record Removal Notice**



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Correspondents / Participants Andreas A. Papasolomontos				ан салан салан Салан салан сал		
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# CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A. Telephone (Area Code 202) 334-8021 Cable Address – INTBAFRAD

FROM: The Secretariat

June 26, 1986

International Board for Plant Genetic Resources (IBPGR)

# Appointments to the Board of Trustees (Note: Responses requested by August 15, 1986)

1. At the Ottawa meeting of the CGIAR, the Group approved the proposal by the IBPGR Committee that the freeze on the appointment of new members to the Board of Trustees of the IBPGR be lifted. Consequently, members whose terms expire in 1986 and those whose terms had expired in 1985 but were extended because of the freeze, will now be leaving the Board at 31st December 1986.

2. The following eight members of the IBPGR Board will be retiring from the Board in December 1986: Drs. C.J. Bishop, J.P. Cooper, Q. Jones, A.B. Joshi, S.A. Qureshi, G. Scarascia-Mugnozza, D. Sene and Xu Yuntian. Dr. Kahre, the Chairman of the Board is also retiring. All of these Board members are CGIAR nominees, as per the rules of procedures for IBPGR.

3. Recommendation 7, Section 3.3 of the recent management review of the IBPGR stated:

"The Panel <u>recommends</u> that, as is the practice in most other Centers, the CGIAR nominate at least three (and at most six) of the Board members for election by the Board and that the Board select the remaining members without CGIAR approval."

The Board accepted the recommendation as follows:

"The Board accepts this recommendation, agrees that four is an appropriate number. The Chairman of the IBPGR Board membership nominations sub-committee will consult frequently with the CGIAR Secretariat to ensure the presence of appropriate expertise on the Board."

4. The Board has decided to keep the four CGIAR nominated members of the existing Board, whose terms expire in 1987, as at-large members. These are Drs. Fischbeck, Kikuchi, Peacock and Valmayor.

5. The Group is requested, therefore, to submit names of suitably-qualified people as CGIAR nominees for four of the nine vacancies on the Board that will require filling by the end of 1986. The Board, however, will consider the names submitted by the Group for all nine vacancies that will occur. When the Board makes its final selection it will ask for approval of four names as CGIAR nominees and will appoint the other five as at-large members.

### INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES (IBPGR)

## Board of Trustees

Dr. Lennart Kahre (Chairman) Department of Plant Husbandry Swedish University of Agricultural Sciences Box 7042 S-75007 Uppsala Sweden Phone: (018) 17 10 81 (0) 08 755 4230 (H) Telex: 760 62 Ultbibl

Dr. Charles J. Bishop Research Coordinator Research Branch Agriculture Canada Ottawa, Canada K1A OC5 Phone: (613) 995-7084 (0) (613) 722-9586

Dr. Lucas Brader Director, AGP Plant Production and Protection Division Food and Agriculture Organization of the U.N. Via delle Terme di Caracalla Rome 00100, Italy

Dr. John Philip Cooper 31 West End Minchinhampton Stroud, Gloucs GL6 9JA United Kingdom

Dr. Richard H. Demuth (Chairman Emer.) Jones, Day, Reavis & Pogue P.O. Box 7805 Ben Franklin Station Washington, D.C. 20044, U.S.A. Phone: (202) 879-3939 Telex: (Domestic) 892410 (International) 64363 Cable: ATTORNEYS WASHINGTON

Professor Gerhard Fischbeck Technische Universitkt Munchen Lenhrstuhl fur Pflanzenbau und Pflanzenzuchtung der TU Muchen 8050 Freising - Weihenstephan Federal Republic of Germany Phone: (08161) 71422

Dr. Dalmo C. Giacometti CENARGEN/EMPRAPA Avenida W-5 Norte Parque Rural C.P. 10.2372 CEP 70.000 Brasilia D.F., Brazil Phone: (061) 1622 Dr. Quentin Jones 7997 Brown Bridge Road Fulton, Maryland 20759 U.S.A. Phone: (301) 344-3311 (0) (301) 286-2284 (H) Dr. A.B. Joshi 10 Aboli Apartments 102/103 Erandawana Law College Road Pune 411 004 Maharashtra State, India Telex: 11-3578 MKRS IN 11-4909 MXPO IN Professor F. Kikuchi Institute of Agriculture and Forestry University of Tsukuba Sakuramura, Niiharigun Ibaraki-ken Japan 305 Telex: 3652580 UNTUKUJ Prof. Reuben Olembo Director Environmental Management Service UNEP P.O. Box 30552 Nairobi, Kenya Telex: 22068 Cable: UNITERRA NAIROBI Dr. William J. Peacock Chief Division of Plant Industry CSIRO P.O. Box 1600 Canberra City Australian Capital Territory 2601 Australia Telex: PICAN AA 62351

6. The Board has analyzed its current composition and its work program and has identified the mix of disciplines, nationalities and geographic expertise that should be represented on the Board. Consequently, the Board requires nominations of people who are outstanding in the following specializations:

- (i) field botany/biosystematics, with particular emphasis on forages and plant distributions in Africa;
- (ii) pathology, with specialization in population genetics and disease indexing and emphasis on legume crops;
- (iii) in vitro techniques with interest in virology;
- (iv) seed physiology; and
- (v) research management, with emphasis on financial expertise.

In considering persons to be nominated, members may wish to refer to the section in the External Review dealing with the IBPGR trustees, beginning on page 14 of the management section. The Panel emphasized the need for the Board to devote more attention to organizational and management matters, so that a special effort should be made to add individuals with a high level of expertise in these areas.

7. The Board would like to have names of women scientists with the above specializations. The Board requires a range of nationalities and geographic expertise, but in particular from Africa, the Pacific, South-west Asia, China and Eastern Europe, and requires at least four nationals of developing countries. The Board will also be evaluating people for qualities of leadership, combined with the time availability to head the Board's sub-committees, as well as the Committee of the whole. To avoid potential conflicts of interest, curators of gene banks cannot be appointed to the Board.

8. The names of qualified people, accompanied whenever possible by their curriculum vitae should reach the CG Secretariat by **August 15, 1986.** Where a C.V. is not available, a brief career summary is essential.

9. A list of the current members of the IBPGR Board is attached for information.

Attachment

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CGIAR Members TAC Chairman TAC Secretariat Chairman of IBPGR Board Director of IBPGR WORLDBANK MSS

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THE SECRETARIAT CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH 1818 H STREET, N.W. WASHINGTON D.C. 20433. U.S.A. C/O WORLD BANK. WASHINGTON D.C.

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Mail IBPGR, ar, su Farrar visit to Rome To: Mr. Murthi Anishetty, IBPGR From: Curtis Farrar, CGR Date: January 14, 1987 Re lunch. Unfortunately I already have a luncheon appointment on the 23rd. Lunch in general will be a problem. Let's see what we can work out once I get to Rome. Regards Farrar. .s .end

K

GR

and the second

To: C.FARRAR (CGI005) From: IBPGR (CGI101) Posted: Wed 14-Jan-87 9:34 EST Sys 57 (8) Subject: Rome visit

To: Curt Farrar, CGIAR Murthi Anishetty, IBPGR (CGI101) From:

Re your visit to Rome 23-29 January please advise if you will be free for lunch on 23 January and I will make a reservation.

# Best regards

this is the same day you are limeling with B-Friedbein, Would limeling with B-Friedbein, Would the attached you like we to send the attached you like we to send the attached you like in response? 1/14/87 an amendee