REPORT OF THE

FIRST GOVERNING

BOARD MEETING

Held in Geneva

15-18 December 1980

FAO/UNDP EUROPEAN COOPERATIVE PROGRAMME FOR CONSERVATION AND EXCHANGE OF CROP GENETIC RESOURCES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

UNITED NATIONS DEVELOPMENT PROGRAMME

RER/80/005
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Meeting Report

FAO/UNDP EUROPEAN COOPERATIVE PROGRAMME

FOR

CONSERVATION AND EXCHANGE OF CROP GENETIC RESOURCES

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TABLE OF CONTENTS

I INTRODUCTION

1. This report is a summary of the proceedings of the First Governing Board Meeting of the FAO/UNDP European Co-operative Programme for the Conservation and Exchange of Crop Genetic Resources (ECP/GR).

2. The meeting was held in the Palais des Nations, Geneva, Switzerland, from 15 - 18 December 1980.

3. Those who attended were in the following categories:

3.1 Members:

- representatives of countries participating in the programme (ECP/GR)
- representatives from UNDP and FAO
- the Executive Secretary of the ECP/GR
- the Chairman of the Scientific Advisory Committee

3.2 Observers:

- permanent observers from sub-regional European organizations for plant genetic resources
- permanent observers from IBPGR
- observers from:
  - European Countries not yet participating in ECP/GR
  - the ECP/GR Scientific Advisory Committee
  - EUCARPIA
  - the Secretariat of the International Union for the Protection of New Varieties of Plants (UPOV)
  - consultants to the Executive Secretary

A list of participants is given in Appendix I.

4. At the Governments Consultation held in December 1979, the representatives from twenty-two European countries unanimously endorsed the proposed programme of the ECP/GR, approved the draft Project Document, elected an Interim Governing Board and nominated the Executive Secretary, Mr. G. de Bakker, who was subsequentl appointed by the Executive Agency FAO.

5. The provisional Board initiated the meeting reported here and acted in a provisional capacity until it was formally constituted early in the proceedings of this meeting (see III. 2 below).

II OPENING

6. In opening the meeting, the provisional Chairman (Mr. M. Pencic, Yugoslavia) welcomed representatives and observers and said that both the UNDP and FAO hoped for active and co-operative participation by all countries in the project. The main purpose of the present meeting was to elect formally the Board and its officers and agree on a programme of work for the first phase of the project now that it was operational.

7. The proposed Agenda was adopted (Appendix II).

8. In welcoming delegates and observers, Mr. J.T. Williams said on behalf of the Director-General of FAO that the organization was delighted with the response that countries had shown to ECP/GR. FAO wished to see the establishment of a global network of genetic resources activities. Thus, the Organization looked forward to ECP/GR carrying out an active and successful programme concerned with the exchange and use of plant genetic resources not only within Europe but also between European countries and other parts of the World - to the benefit of all.

9. Speaking for the UNDP, Mr. S. Makiedo assured the meeting of the continued interest and support of this Organization. Now that the project was operational with so many countries ready to participate in the work programme, he was sure that co-operative activity would be developed successfully.

10. Good wishes for the success of the project were expressed by the new Chairman of IBPGR, Mr. L. Kåhre.

11. Mr. H. Mast thanked the provisional Board for the invitation to UPOV to attend in an observer capacity. This Organization would co-operate in every way to further the interests of the project.

III PROCEEDINGS

III. 1) Present situation

12. The provisional Chairman invited the Executive Secretary briefly to describe the present status of the ECP/GR.

13. The Executive Secretary said that the project became operational on 1 October by which time eight countries had signed the project document of which three were

in receipt of IPF contributions. Since then other countries had signed or expressed the intention to do so. The total was now 21 countries prepared to participate in the project.

III. 2) Rules of Procedure and Officers

14. The provisional Chairman reminded the meeting that with the project operational, the Board could now be formally constituted and Rules of Procedure adopted.

15. The Vice-Chairman proposed that the Rules of Procedure for the Board should be those defined in Appendix II (page 41) of the Report of the FAO/UNDP/Governments Consultation on ECP/GR, December 1979, amended by the deletion of the words 'provisional' and 'interim' wherever they occurred.

16. The Executive Secretary asked for a correction to be made to Rule 10; Russian was not a working language of the UNDP and reference to it should be deleted from the text.

17. Subject to this correction, the Rules of Procedure were adopted (Appendix III).

18. The delegate of Sweden proposed under Rule 5 that the Provisional Chairman and Vice-Chairman of the Interim Board of ECP/GR, Mr. Penčić and Mr. Skov, respectively, should be confirmed in office for the coming year as Chairman and Vice-Chairman respectively, of the Board of the ECP/GR. The proposal was adopted.

III. 3) Official languages

19. The Executive Secretary asked the Board to give sympathetic consideration to a proposal that would minimise the cost of providing interpreters for meetings and translations of documents, for which very limited funds were available. The proposal was that interpreters should be provided only for French and English; that documents dealing with important aspects of policy should be translated only into English and French and that technical documents should be in English originally. They would be translated into any other language by courtesy of an appropriate country as a contribution in-kind to the project and then submitted to the Executive Secretary for circulation as necessary. Project correspondence would be conducted in any of the three working languages.

20. After discussion in which the Spanish representative, who agreed to forego translation into Spanish, and the French representative participated, it was agreed to adopt the proposal with the proviso that the Executive Secretary would endeavour as far as possible to conform to the accepted practice in UN Agencies of conducting business in the approved working languages.

III. 4) Scientific Advisory Committee

21. The composition of the Scientific Advisory Committee was discussed. The Board agreed that the Committee should consist of the members of the EUCARPIA Gene Bank Committee with the addition of the following three members:

- Mr. L. Djilianov, Permanent Representative of Bulgaria to FAO, Rome, Italy
- Mr. Max Rives, Head of Plant Breeding Department of the National Institute of Agricultural Research, INRA, Paris, France
- Mr. L. Seidewitz, Scientific Co-operator, Institut für Pflanzenbau und Pflanzenzüchtung, FAL, Bundesallee 50, D-3300 Braunschweig, Federal Republic of Germany

The full membership of the Committee is given in Appendix IV.

22. The statement on page 28 of the Report of the FAO/UNDP/Governments Consultation, December 1979, was approved by the Board; namely

> "The Scientific Advisory Committee can seek assistance by inviting other specialists to its meetings, especially drawn from the group of directors and scientific staff of the national institutions for plant genetic resources in Europe, from the sub-regional groups and from other organizations."

III. 5) Documentation

23. Mr. S. Blixt (Weibullsholm Plant Breeding Institute, Sweden), consultant to the ECP/GR, presented a technical paper on the management of gene bank data (Appendix V).

24. In subsequent discussion, the delegate from Poland emphasized the fact that genotypes were the material of a gene bank whether collected as individuals or populations.

25. The Belgium delegation suggested two amendments to the text to clarify the definitions of 'qualitative descriptors' and 'scale descriptors'.

26. The adoption of the technical paper with the inclusion of the suggested amendments was proposed by the delegate of the Netherlands and accepted by the Board.

27. The Board suspended its deliberations for one and a half hours to attend a demonstration arranged by Mr. Blixt using an example of a particular system of data management on a small computer and to view a display illustrating documentatic

and data management for plant genetic resources mounted by Mr. B. Ford-Lloyd (Birmingham University, UK), consultant to the ECP/GR and the FAO/IBPGR secretariat.

28. The delegate of the Federal Republic of Germany, the Executive Secretary of IBPGR and the delegate of the United Kingdom all referred to the separate efforts that are being made by several institutions and sub-regional groups to prepare descriptor lists. The latter expressed the common view that the Board should endeavour to encourage an exchange of information between these groups of workers with a view to developing a generally acceptable approach to the problem.

29. In response to a query from the Executive Secretary about the feasibility of a copy of the descriptor lists used within COMECON being made available to the Board, the Polish delegation offered to try and arrange to have them translated from Russian into English in Poland and then forwarded to the Executive Secretary. This offer was gratefully accepted by the Board and also by the Chairman Elect of the IBPGR (Mr. Kåhre, Sweden).

30. As a step towards achieving an agreed policy for descriptor lists, the Board agreed that the Advisory Committee should consider the problem with the co-operation of Mr. Blixt and any other specialist that it wished to co-opt. The Chairman of the Scientific Advisory Committee undertook to bring the problem before the Committee with a view to reporting progress at the next Board Meeting.

III. 6) European Crop Genetic Resources Centres

31. The Executive Secretary submitted a paper on this subject in which a main thesis was that the task of conserving and exchanging germplasm for crops in Europe would be eased by sharing the work between institutions (Appendix VI).

32. The requirements specified for an institution to qualify as an European Crop Genetic Resources Centre for one or more crops, and the suggested list of institutions in the paper to which the responsibility for certain crops should be allocated, led to lengthy discussion. The main points raised were as follows:

(i) - an institute should meet the requirements appropriate for a genetic resources centre to qualify as a crop germplasm centre: see Paragraph 34 (FAO/IBPGR.)

(ii) - an essential requisite should be the publication of an index seminum or a computer printout in which data on the characterization of accessions should be incorporated as far as possible (German Democratic Republic's delegation)

(iii) - full cognizance should be taken of gene banks at the sub-regional level and these should be asked to share the task of forming a European network of crop genetic resources centres (Executive Secretary).

(iv) - The European network has to be a basic part of the global network being developed by IBPGR (Chairman of IBPGR).

(v) - the list of European Crop Genetic Resources Centres should remain open so that it can be extended to include institutes that qualify for recognition in the future (the delegate of Greece).

33. From the many amendments and additions to the text of the paper suggested by members of the Board as well as the numerous points that obviously called for further careful consideration, it became clear that a definitive course of action could not be decided upon at the present meeting, although the principle of sharing responsibilities and constructing a network of European crop genetic resources centres was generally accepted.

34. The Vice-Chairman proposed to accept in principle the seven criteria mentioned on Page 1 of the Working Document GR/GB80/WP 5, as amended during the discussion, that would have to be met before an institute could qualify within the ECP/GR as an European Crop Genetic Centre, namely:

(i) - having already a comprehensive collection of the crop(s) concerned and willing to practise full and free exchange of materials

(ii) - having specialized knowledge of the crop(s) concerned as a result of recognized past work

(iii) - having adequate facilities for storing or in the case of vegetatively propagated material being able to co-ordinate **living collections,** and able to co-ordinate characterization and to carry responsibility for regenerating, multiplying and evaluating the crop(s) concerned

(iv) - able to co-ordinate and accept responsibility for the documentation and exchange of material of the crop(s) concerned according to agreed principles

(v) - able to co-ordinate the organization of and/or participation in collecting expeditions to enlarge present collections

(vi) - being situated in a country that is a member of the programme

(vii) - publishing an index seminum or computer print-out of collections.

The Board unanimously approved these seven criteria in principle.

35. The Chairman's proposal that the whole question of establishing European Crop Genetic Resources Centres should be elaborated further in contact with individual countries during the course of the year, was accepted by the Board. The aim would be to have a report on the subject ready for consideration by the Board at its next meeting.

36. The Board authorized the Executive Secretary to begin a programme of activities related to the ultimate development of European Crop Genetic Resources Centres by establishing some working groups for certain crops and approaching certain institutions that could begin their work as European Crop Genetic Resources Centres for selected crops.

III. 7) Collecting Expeditions

37. The Executive Secretary submitted a paper for the Board's consideration which proposed guidelines to be followed by expeditions carried out with financial support from ECP/GR; it also included a report of crop plant collecting expeditions made by member countries both within Europe and in other countries between 1978 and 1980 and planned expeditions for 1981 and 1982.

38. The guidelines were adopted by the Board after one or two amendments had been made. The guidelines are:

(i) - adequate sub-samples of collected material must be left in the country where the material is collected

(ii) - a national scientist should whenever possible be the leader or co-leader of the expedition

(iii) - the material and the data must be available for exchange after a reasonable time

(iv) - an expedition report must be prepared and must include, whenever possible, preliminary evaluation data (passport descriptors and characterization descriptors)

(v) - there must be willingness to discuss the possiblity of joint expeditions with scientists from other European countries

39. In response to the Swedish delegate's reminder that care should be taken to ensure that ECP/GR's limited funds are used for collecting crops in Europe with high priority, the Board concluded that the Scientific Advisory Committee should be instructed to determine gaps in existing collections. The Chairman of the Scientific Advisory Committee agreed to take the matter up in the Committee. The findings would be passed along to countries as appropriate.

III. 8) Evaluation

40. The Executive Secretary introduced the subject of crop genetic resources evaluation by referring to the categories of data agreed by the IBPGR, which are essential in order to make full use of material in a gene bank; these are passport-, characterization- and evaluation data. The meaning of these terms and aspects and problems of the work, are discussed in an article by W. ERSKINE and J.T. WILLIAMS in Genetic Resources Newsletter No. 41, March 1980, of which a copy was included in the papers issued to each member at the meeting.

41. The Executive Secretary thought that one of the most urgent tasks for the ECP/GR was to collate available data on existing collections and to persuade those in charge of collections to give high priority to complete this work. Passport data and other items of interest to breeders should be incorporated in the index seminum of an institution and circulated to other parties as soon as possible.

42. Mr. J.T. Williams instanced the many shortcomings both in range of genetic variability and documentation of particular crops that were exposed in many of the existing large collections when the Secretariat of the IBPGR attempted to assess what is being stored. Numbers of samples alone was not a satisfactory indication of sufficiency; representative genetic variability must be present. He thought that taxonomic (morphological) criteria should not be given undue attention. Evaluation should be closely geared to the requirements of the plant breeder. Indeed, evaluation proper (as contrasted with characterization) was primarily the task of the plant breeder.

43. Evaluation in the widest sense was an 'open-ended' task for which national and international collaboration was imperative. It could be expected to give fuller assessment of materials as in multi-site trials.

44. The Board heard with satisfaction about the on-going evaluation activities in the member countries of COMECON, EEC, EUCARPIA and in FAO research networks described by their respective delegates.

45. The delegates associated with the gene banks designated to represent North-, Central- and South Europe, in the EUCARPIA concept, Lund, Braunschweig and Bari

respectively, were invited to describe their evaluation work and did so.

46. The Board noted with satisfaction that the Nordic Gene Bank, Bari and Gatersleben were collaborating in evaluation on a regional basis.

47. The delegate of the Federal Republic of Germany said that at Braunschweig evaluation was at a national level to meet requirements specified by the requirements of the Federal Republic of Germany's plant breeders.

48. The Executive Secretary observed that as judged by the reports to the meeting, more national and international evaluation trials were being conducted than were perhaps realized. He thought that such trials should not be organized by the Programme in Phase I of ECP/GR. The aim would be to encourage member countries and sub-regional groupings to evaluate material by national and international trials and to disseminate the results as soon as possible by means of an index seminum or printout.

49. The delegate of the United Kingdom was of the opinion that the complex operation of arranging collaborative evaluation trials and their analysis was outside the realm of ECP/GR. It would be more desirable to concentrate on genetic resources activities sensu stricto, such as the conservation of plant material threatened by loss.

III. 9) Directory of European Crop Genetic Resources Institutions

50. This draft document was tabled for the information of the Board. In order to make the Directory as comprehensive as possible, it was agreed that the Executive Secretary would send a questionnaire to all member countries for completion. It would ask for amendments, corrections and particulars of institutes and organizations, both public and private, and their scientific personnel concerned with genetic resources. Special mention was made by the delegate of Switzerland of the need to obtain information about material with agricultural significance that might be available in botanic gardens.

III. 10) Training, Workshops and Seminars

51. Mr. Hawkes was invited by the Chairman to introduce his paper on Training, Workshops and Seminars, prepared from answers to a questionnaire sent to each member country (Appendix VII).

52. The delegates of Netherlands, German Democratic Republic and the Federal Republic of Germany gave additional information about training facilities in their respective countries for inclusion in a revised issue of Mr. Hawkes paper. The delegate of France undertook to send to Mr. Hawkes particulars of suitable training courses available in France.

53. The Polish delegate was of the opinion that aspects of plant breeding should be a major component of training courses. He also favoured the development of bilateral exchange programmes to minimize the cost of training.

54. The Swedish delegate confirmed that training could be included under bilateral agreements between countries.

55. In summing up the discussion, the Executive Secretary said that he would circulate a questionnaire to member countries to ascertain training requirements. He would also enquire about ways by which training could be funded, and thus supplement the information assembled by Mr. Hawkes.

56. In a written note the delegate of the Soviet Union expressed that there was the possibility of both collaborative research and the training of individual and groups of specialists at institutes in the U.S.S.R., making use of the large accumulation of rubles (about 25 millions) in the regular and development programmes of the United Nations.

III. 11) Links with International Programmes

57. In presenting a paper on this subject, Mr. J.T. Williams, Executive Secretary of the IBPGR, said that the programmes of FAO and the IBPGR were in effect one programme with the aim in common of establishing a global network of genetic resources activities. The ECP/GR would be concerned to develop the European part of this network and through its collaboration with the IBPGR, have a link with genetic resources activities in the developing countries outside Europe. There was also the possibility for the IBPGR to be involved directly in some of the activities in some member countries of the ECP/GR.

58. The Executive Secretary of the ECP/GR took the opportunity provided by this item on the Agenda, to acknowledge the generous help given by the IBPGR Secretariat in the preparation of papers for the First Board meeting.

III. 12) Other proposals

59. The Executive Secretary of IBPGR proposed that in view of the likelihood that the evaluation of Phase I of ECP/GR would take place next September, a meeting of the Scientific Advisory Committee should be held earlier than one planned to coincide with the meeting of the EUCARPIA Advisory Committee next July; otherwise, the Committee would have little impact on the Work Programme of Phase I prior to the appraisal.

60. In reply, the Chairman of the Scientific Advisory Committee said that apart from the problem of funding such a meeting, it was doubtful whether Committee members would be free to attend it. However, he would consider what action could be taken.

61. With reference to documentation (see III.5)) the delegate of Poland proposed that a Working Group should be formed to consider conversion programmes to facilitate data exchanges. The Board agreed that this was a suitable subject for the Scientific Advisory Committee to examine. Asked for his view by the Chairman, Mr. Blixt said that he saw no difficulty in this matter being dealt with by correspondence between the specialists concerned. Action should be taken as soon as possible.

III. 13) Location of the Secretariat

62. The representatives of Italy and Switzerland intimated to the Board (the former by a letter from the Permanent Representative of Italy to the UN Offices in Geneva, on behalf of the Italian Government, and the latter in a written statement) (Appendix VIIIA and B) that the Italian Government and the Swiss Confederation each offered to accommodate the Secretariat of the ECP/GR and to provide it with a full range of facilities to further the work of the Co-operative Programme.

63. After a discussion in which representatives from the Netherlands, UNDP and Sweden drew attention to the many factual and legal factors that would have to be taken into account in considering the two proposals, the Vice-Chairman expressed the Board's thanks for the generous offer. They would be given careful consideration by the sponsoring UN Agencies and reconsidered by the Governing Board of the Programme.

III. 14) The Future of the ECP/GR

64. The Executive Secretary asked the Board to consider various problems, mainly budgetary, discussed in his paper on the ' Future of the Programme'.

65. Assuming that the work programme in Phase II was along the same lines as that in Phase I and that activities were pursued at a similar level, at a rough estimate a budget of between $ 500.000 - 600.000 could be required, allowing for continuing inflation of which approx. $ 50.000 would be used to pay daily subsistence and travel costs for consultants and members of small working groups.

66. He further made the suggestion that during the three years' duration of Phase II, an annual UNDP contribution, if granted, might be 70%, 50% and 30% of the total yearly budget (i.e. an annual reduction of 20%) with a corresponding increase in the total yearly contributions of member countries.

67. Lacking alternative suggestions prior to the meeting, the Executive Secretary put forward his own suggestion that each member government's share of costs should be directly related to the percentage amount it contributes to the United Nations.

68. The following points emerged from subsequent discussion:

(i) that a UNDP decision could not be taken until after the UNDP meeting next May to consider European regional project priorities, and that in any case a request for financial support would have to state specific monetary amounts (UNDP representative)

(ii) that a detailed budget for each year was necessary as well as a decision about the location of the Project (the delegates of Netherlands and Spain)

(iii) an alternative system for sharing costs might be for each country to pay a fixed amount with any shortfall made up by the most wealthy countries (the delegate of the Federal Republic of Germany); or the system used by WIPO and UPOV might be considered (the Danish delegate).

69. It was finally agreed by the Board that the Executive Secretary should draw up a preliminary proposal for the budget in Phase II, bearing in mind the points raised in the discussion. This could be reviewed by the officers of the Board (Chairman, Vice-Chairman and Executive Secretary) in consultation with FAO and UNDP and then submitted, if possible by March 1981, to member countries for consideration. Based on their reactions and on the outcome of the UNDP Regional European Meeting in May, a definite proposal could be circulated with the Second Board meeting documentation.

70. As regards the timing of events prior to the start of Phase II on 1 January 1983, it was agreed that the following schedule should be followed:

Meeting of Scientific Advisory Committee	July 1981
Evaluation of Project	September 1981
Despatch of Second Board Meeting documents	October 1981
Second Board Meeting	14-18 December 1981

III. 15) Work Plan for 1981

71. The Work Plan submitted to the Board by the Executive Secretary was slightly amended by the Board and then approved (Appendix IX).

III. 16) Contribution in Kind

72. The delegates of Poland and German Democratic Republic both asked for an annual progress report to be requested from each member country, the reports to be circulated by the Executive Secretary.

IV ADOPTION OF REPORT

73. A draft report was considered during the final afternoon session of the Board meeting. The report was adopted after various amendments had been made.

74. At the end of the discussion, the Vice-Chairman said that the good progress that had been made was undoubtedly due to the carefull preparations made for the meeting and the goodwill of participants. He hoped that future meetings would be no less successful.

V CLOSURE

75. The Chairman of the Board, thanked all those who had prepared papers for the Meeting, or helped with their preparation, and extended his good wishes to all participants. The Meeting was then declared closed.

APPENDIX I
(paragraph 3)

PARTICIPANTS

1. MEMBERS

1.1 Country members:

BELGIUM

Dr. C. POPULER
Chef de Section
Station de Phytopathologie
Avenue Maréchal Juin 13
B-5800 GEMBLOUX

BULGARIA

Prof. Dr. K. KOSTOV
Director
Institute of Plant Introduction
and Genetic Resources
PLOVDIV - SADOVO

CYPRUS

Dr. V.D. KRENTOS
Director
Agricultural Research Institute
Ministry of Agriculture and
Natural Resources
NICOSIA

DENMARK

Dr. H. SKOV
Chief of Administration
Statens Planteavlskontor
Virumgaard
Kongevejen 83
DK-2800 LYNGBY

FINLAND

Dr. R. MANNER
Director
Institute of Plant Breeding
31600 JOKIOINEN

FRANCE

Dr. R. CASSINI
Maître de Recherches INRA
Station de Pathologie Végétale
INRA-CNRA
Route de Saint-Cyr
78000 VERSAILLES

Mr. L. LE VERT
Secretaire des Affaires Etrangers
Ministère des Affaires Etrangers
37 Quai d'Orsay
75007 PARIS

FEDERAL REPUBLIC OF GERMANY

Dr. R. JORDENS
Regierungsrat z.A.
Bundesministerium für Ernährung
Landwirtschaft und Forsten
Postfach
D-5300 BONN 1

Dr. L. SEIDEWITZ
Scientific Co-operator
Institut für Pflanzenbau und
Pflanzenzüchtung FAL
Bundesforschungsanstalt für Landwirtschaft
Bundesallee 50
D-3300 BRAUNSCHWEIG

GERMAN DEMOCRATIC REPUBLIC

Dr. M. ZACHARIAS
Deputy Director
Zentralinstitut für Genetik und
Kulturpflanzenforschung
Correnssstr. 3
DDR-4325 GATERSLEBEN

GREECE

Dr. E. SKORDA
Deputy Director
Cereal Institute
THESSALONIKI

HUNGARY

Dr. J. UNK
Director
Research Centre for Agrobotany,
NIAVT
H-2766 TÁPIÓSZELE

Dr. L. HOLLY
Head of Gene Bank Section
Research Centre for Agrobotany
NIAVT
H-2766 TÁPIÓSZELE

ITALY

Prof. E. PORCEDDU
Director
Germplasm Institute
Via Amendola, 165/A
70162 BARI

Dr. M. INCISA DI CAMERANA
Senior Counsellor
Permanent Mission of Italy to the
United Nations Offices in Geneva

NETHERLANDS

Ir. H.H. VAN DER BORG
Coordinateur de la Recherche
Agricole Internationale
Mansholtlaan 4
6708 PA WAGENINGEN

Dr. H. LAMBERTS
Director
Foundation for Agricultural
Plant Breeding
P.O. Box 117
6700 AC WAGENINGEN

NORWAY

Dr. L.R. HANSEN
Chief of Administration
The National Seed Council
Moervøien 12
1430 ÅS

POLAND

Dr. J. JAKUBIEC
Deputy Director of I.H.A.R.
Plant Breeding and Acclimatization
Institute
05-870 Blonie
Radzikow, K/WARSAW

Dr. B. KRAMSKI
Director of UNDP/FAO
Agriculture Programme
Wspolna str. 30
00-950 WARSAW

Mr. J. KONOPKA
System Analyst - Programmer
Plant Breeding and Acclimatization
Institute, I.H.A.R.
05-870 Blonie
Radzikow, K/WARSAW

ROMANIA

Dr. P. VARGA
Head of the Genetic Resources Dept.
Research Institute for Cereals and
Technical Plants, I.C.C.P.T.
Fundulea
8264 Jud. ILFOV

SPAIN

Dr. P. VEYRAT
Director de Programas I.N.I.A.
Instituto Nacional de
Investigaciones Agrarias
José Abascar 56
MADRID 3

Dr. J.M. BOLIVAR
Coordinador Adjunto de
Recursos Geneticos I.N.I.A.
Instituto Nacional de
Investigaciones Agrarias
José Abascal 56
MADRID 3

Dr. M.A. BUENO PEREZ
Director
Banco de Germoplasma I.N.I.A.
Instituto Nacional de
Investigaciones Agrarias
Finca "El Encin" ap. 127
Alcala de Henares
MADRID

Dr. J.R. PRIETO
Conseiller Agricole
Mission permanente d'Espagne
auprès de l'ONU à Genève

SWEDEN

Prof. L. KÅHRE
Director
Swedish Seed Testing and
Certification Institute
S-17173 SOLNA

SWITZERLAND

Dr. M. INGOLD
Directeur Adjoint
Station **Fédérale** de Recherche
Agronomique de Changins
CH-1260 NYON

Dr. G. KLEIJER
Chef de la Section Génétique
Station **Fédérale** de Recherche
Agronomique de Changins
CH-1260 NYON

UNITED KINGDOM

Dr. G. JENKINS
Scientific Adviser of
Plant Breeding and Genetics
Agricultural Research Council
160 Great Portland Street
LONDON WIN 6 DT

YUGOSLAVIA

Dr. M. PENČIČ
Director of
Maize Research Institute
P.O. Box 89
11081 BELGRADE - **Zemun**

1.2 Ex officio members

FOOD AND AGRICULTURE
ORGANIZATION

Dr. A. AL-JAFF
Chief Agricultural Operations **AGON**
FAO/HQ, ROME

Dr. J.T. WILLIAMS
Officer-in-Charge
Genetic Resources EGP and
Executive Secretary International
Board for Plant Genetic Resources
FAO/HQ, ROME

Mr. C.H. HOWES
Genetic Resources Officer
(Documentation)
FAO/HQ, ROME

UNITED NATIONS
DEVELOPMENT PROGRAMME

Dr. S. MAKIEDO
Senior Consultant
c/o UNDP
P.O.Box 644
BEIGRADE, Yugoslavia

Mr. R.G. KNUTSSON
Liaison Officer
UNDP European Office
GENEVA

ECP/GENETIC RESOURCES PROJECT

Dr. G. DE BAKKER
Executive Secretary
ECP Conservation and Exchange
of Crop Genetic Resources
UNDP/HQ, GENEVA

SCIENTIFIC ADVISORY COMMITTEE

Dr. J.G. HAWKES
Chairman of the Scientific Advisory Com.
Chairman of EUCARPIA Gene Bank Committee
University of Birmingham
P.O.Box 363
BIRMINGHAM B15 2TT
United Kingdom

2. OBSERVERS

2.1 Permanent observers:

EEC GENE BANK COMMITTEE

Ir. H.H. VAN DER BORG
Chairman of the EEC Genetic Resourses
Committee
Coordinateur de la Recherche
Agricole International
Mansholtlaan 4
6708 PA WAGENINGEN, Netherlands

Dr. A. PIAVAUX
Administrateur Scientifique
Commission of the European Communities
D G VI-F-4
rue de la Loi 200
B-1049 BRUSSELS

IBPGR MEDITERRANEAN PROGRAMME

Prof. E. PORCEDDU
Chairman of the IBPGR Mediterranean
Germplasm Programme
Germplasm Institute
Via Amendola, 165/A
70162 BARI, Italy

NORDIC GENE BANK

Dr. E.H. KJELLQVIST
Director
Nordic Gene Bank
P.O. Box 1543
S-22101 LUND, Sweden

Mr. F. YNDGAARD
Deputy Director
Nordic Gene Bank
P.O.Box 1543
S-22101 LUND, Sweden

IBPGR

Dr. J.T. WILLIAMS
Executive Secretary, International
Board for Plant Genetic Resources
FAO/HQ, ROME

2.2 Ad hoc observers:

CZECHOSLOVAKIA

Dr. P. ONDREJČEK
First Secretary of the Czechoslovak
Socialist Republic to the
United Nations Offices in Geneva

TURKEY

Mr. O.I. YARGAN
Conseiller Commercial Adjoint
Mission permanente de Turquie
auprès de l'ONU à Genève

USSR

Mr. I.S. GOURIEV
First Secretary of the
Permanent Mission of the USSR to
United Nations Offices in Geneva

EUCARPIA

Dr. H. LAMBERTS
President of EUCARPIA
Foundation for Agricultural Plant Breeding
P.O.Box 117
6700 AC WAGENINGEN, Netherlands

Dr. J.G. HAWKES
Chairman of EUCARPIA Gene Bank Committee
University of Birmingham
P.O.Box 363
BIRMINGHAM B15 2TT, UK

UPOV

Dr. H. MAST
Vice Secretary-General of the International Union for the Protection of New Varieties of Plants
34 chemin des Colombettes
1211 GENEVA 20

Dr. M.H. THIELE-WITTIG
Senior Technical Officer
UPOV
34 chemin des Colombettes
1211 GENEVA 20

Mr. A.T.F. WHEELER
Legal Officer
UPOV
34 chemin des Colombettes
1211 GENEVA 20

Mr. A. HEITZ
Assistant administratif et technique UPOV
34 chemin des Colombettes
1211 GENEVA 20

CONSULTANTS TO THE EXECUTIVE SECRETARY

Prof. S. BLIXT
Weibullsholm Plant Breeding Institute
FACK
S-26120 LANDSKRONA, Sweden

Dr. B.V. FORD-LLOYD
Department of Plant Biology
University of Birminham
P.O. Box 363
BIRMINHAM B15 2TT
United Kingdom

RAPPORTEUR

Dr. K.S. DODDS
Senior Consultant to FAO/HQ, Rome
17, Temple Street
BRIGHTON BN1 3BH
United Kingdom

APPENDIX II

(paragraph 7)

PROVISIONAL AGENDA

Monday 14.30. I. Introduction of the Programme

1. Welcome and adoption of the Agenda

2. Explanation of the objectives, working methods and phases I, II and III * (pages 20 to 34)

3. Rules of Procedure for the Governing Board * (pages 41 to 43)

4. Provisional membership list

5. Use of official languages

6. Appointment of members of Scientific Advisory Committee * (page 4, pt. 24, page 26, pt. 6)

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* Report of the FAO/UNDP Government's consultation on the European Co-operative Programme for the Conservation and Exchange of Genetic Resources for Plant Breeding, held in Geneva 17-19 December, 1979.

Tuesday 09.00 II. Work Plan 1980-1981

7. Report on different systems for documentation in use throughout Europe; suggestions for managing genetic resources data on a computer; international co-operation in data exchange; training needs and how these can be met

- Demonstration of an existing computer system for managing data
- Poster display on data management methods
- Discussion session

14.30 8. Designation and responsibilities of institutions holding major collections of crops (European Crop Germplasm Centres)

9. Collecting expeditions:

a) undertaken by European institutions outside Europe (information only)

b) Undertaken inside Europe information and joint planning, when feasible

Wednesday 09.00 10. Discussion on evaluation of germplasm in different stages:

- passport description;
- characterization (taxonomic and agronomic);
- evaluation for breeding purposes

11. Draft Inventory
Collection of information intended to compose "inventory of crop genetic resources institutions in European countries" aimed at facilitating contacts between institutions both governmental and private.

12. Training courses, workshops and seminars (needs, availability, facilities, planning, budget)

14. 30 13. Links between European crop genetic resources programme and similar activities in other regions, especially in developing countries. Association with IBPGR

14. Other proposals

III. Discussion on future of the programme (PHASE II)

15. First discussion on continuation of the programme in 1982-1985
* (page 3, para. 19(c) and pages 29 and 30)

a) preliminary budget

b) contribution in kind and in cash (proposal for contribution scale)

Thursday morning Free (writing the report)

16. Resolutions, recommendations

17. Approval of the report

APPENDIX III

(paragraph 17)

Rules of Procedure for the
Governing Board of the European Co-operative Programme for the
Conservation and Exchange of Crop Genetic Resources (ECP/GR)

I COMPOSITION

Rule 1

The Governing Board shall consist of one representative from each country participating in the ECP/GR. The representatives shall be nominated by their Governments.

Rule 2

The Governing Board shall furthermore include the following ex officio members: the Executive Secretary of the ECP/GR, the Chairman of the Scientific Advisory Committee of the ECP/GR, and during the UNDP and FAO period of participation, representatives of both these Organizations.

Rule 3

The Governing Board shall invite the sub-regional European organizations for plant genetic resources (the Nordic Gene Bank, the Network of the Council for Mutual Economic Assistance, the IBPGR Mediterranean Germplasm Programme and the Programme on the Use of Gene Banks and Resistance Breeding of the European Communities), and IBPGR to nominate each a representative as permanent observer. Furthermore, ad hoc observers may also be invited.

Rule 4

Each country representative shall have one vote; the ex officio members and the observers shall not have the right to vote.

II ORGANIZATION

Rule 5

The Governing Board shall elect a Chairman and Vice-Chairman from its members. The Chairman and Vice-Chairman shall serve for a two-year period and may be re-elected for no more than one further term of contiguous office. In general, the principle of rotation will be adhered to.

Rule 6

The Governing Board may decide to elect an Executive Committee, which would act for the Governing Board between its meetings. If so, this shall consist of the Chairman and Vice-Chairman of the Governing Board and a maximum of four members of the Board. The Chairman of the Governing Board shall also be Chairman of the Executive Committee. The members of the Executive Committee follow the same rules of rotational retirement and re-election as the Chairman.

Rule 7

If the Governing Board decides not to establish an Executive Committee, the Chairman, Vice-Chairman and the Executive Secretary shall carry out the daily implementation of the Programme.

Rule 8

If the Chairman ceases to be able to carry out his functions or ceases to be a member of the Governing Board, he shall cease to hold such office and the Vice-Chairman shall assume that office for the unexpired term.

Rule 9

The Executive Secretary of the ECP/GR shall act as secretary of the Governing Board and the Executive Committee, including the preparation and distribution of progress reports, minutes of the meetings and any other documentation.

Rule 10

The working languages of the Governing Board shall be the working languages of UNDP (English, French and Spanish). The working language for the meetings, reports and minutes may be any one of these languages.

III MEETINGS

Rule 11

The Governing Board shall hold regular meetings in 1980 and 1981, and thereafter every second year. The venue of these meetings shall rotate among the participating countries.

Rule 12

The Governing Board may hold additional special meetings, but only at the request or with the approval of at least one-third of the participating countries and only if an item of major importance needs to be discussed.

APPENDIX IV

(paragraph 21)

MEMBERS OF THE SCIENTIFIC ADVISORY COMMITTEE

CHAIRMAN :	J.G. HAWKES	(United Kingdom)
MEMBERS :	L.DJILIANOV	(Bulgaria)
	L. KÅHRE	(Sweden)
	H.H. LAMBERTS	(Netherlands)
	C. LEHMANN	(German Democratic Republic)
	A.F. MEREZHKO	(U.S.S.R.)
	M. MOTA	(Portugal)
	M. RIVES	(France)
	T. SCARASCIA-MUGNOZZA	(Italy)
	L. SEIDEWITZ	(Federal Republic of Germany)
	J. SZYRMER	(Poland)
	J. UNK	(Hungary)
SECRETARY:	S. ELLERSTROM	(Sweden)

APPENDIX V

(paragraph 23)

A GENEBANK INFORMATION SYSTEM

The genebank concept

1. A functioning genebank information system must be based on a realistic genebank concept.

(i) The functional unit of evolution - the recombining unit of plant breeding - is the gene. Fundamentally, therefore, a genebank preserves genes; not lines, accessions or varieties; not characters or descriptors. It aims to preserve all known genes of a species; and as many as possible of those not known.

(ii) A genebank preserves - and provides - genetic material for a multitude of purposes; to enable an understanding of the past in order to predict trends in evolution; to provide for present demands; to meet the needs, known and yet unknown, of the future.

(iii) A genebank provides this genetic material to a multitude of institutions. Genes are the basic material for future breeding and crop production but more oftern than not the genetic material must be studied by research groups in several disciplines before it can be used by the plant breeder. It follows, therefore, that genetic material from genebanks must be available to all plant scientists without bias.

(iv) A genebank preserves - and provides - information that is a basis for the efficient utilization of the genetic material. This information must be kept up-to-date to include data from increasingly complex and sophisticated research and plant breeding. This need will be very evident when DNA . recombinant techniques enter into the picture - may be not that far away.

(v) The burden of collating comprehensive information about the genetic resources of crop plants could be shared between genebanks by each one accepting responsibility for the in-depth study of a particular crop (or crops) and undertaking to make this specialized information available to all the other genebanks.

Computerization of data

2. To store, handle and retrieve the amount and complexity of data involved, a computerized genebank information system is the most efficient solution. Several different systems are being used in Europe.

3. Modernization of these systems and the introduction of new technology will inevitably proceed at different rates in different centres to suit individual needs as will the provision of new systems for new genebanks. Also within a particular genebank, different crops, for perfectly good reasons, may well have different documentation systems. This diversity of systems is both inevitable and desirable - each genebank should have the system best suited to its own history, personnel, facilities and national policies.

4. National and international co-operation and data exchange are necessary for full utilization of genetic resources.

5. This can be achieved while maintaining a desirable diversity of systems adhering to so-called input-output compatibility e.g. by using agreed descriptor lists bz which accessions are characterized and evaluated in different collections and an agreed way of representing descriptor states.

Descriptors and descriptor states

6. For convenience, several types of descriptors may be distinguished :

(i) Passport descriptors comprise information pertaining to the history of an accession.

(ii) Management descriptors maybe introduced to cater for aspects of the work other than data storage.

(iii) Character descriptors of which there are several categories:

(a) Descriptors for qualitative characters, determined by one (to a few) genes:

(1) genetic descriptors which as descriptor states give give the allele of a known gene in an accession; the information is totally utilizable in breeding.

(2) qualitative descriptors where the characters are distinct and clearly recognizable but have not been genetically analysed; can be represented by equally clear and distinct descriptor states expressed on a numerical scale e.g. 1-5-9; the greater the number of genes that determine such a character, the more difficult it is to use it in breeding.

b) Descriptors for quantitative, polygenically inherited characters:

(1) metric descriptors with the absolute value of an objectively-measured character as descriptor state; utility in breeding correlated with genetic content of information; highest when heritability can be quantified.

(2) scale descriptors, the descriptor states being a scale of 1 - 9 kind;

7. A minimal list of descriptors should consist of:

   (i) passport data recording accession identifiers and information recorded by collectors

   (ii) characterization by recording those characters which are highly heritable, can be easily seen by the eye or otherwise easily measured and are recognizably expressed in a variety of environments

   (iii) preliminary evaluation consisting of recording a limited number of additional agronomic traits thought desirable by a consensus of users of the particular crop.

8. The evaluation according to a minimal list should be the responsibility of the curators.
Further evaluation should come from the plant breeders or other crop scientists, feeding back the data to the curator for maintenance.

9. Each genebank is free to represent descriptor states inside its own documentation system in whichever way is most suitable to that centre. Before data are sent to another centre in the genetic resources network they should be standardized according to an agreed method of representing descriptor states. Thus any organization receiving data to this standard can easily input the data to its own system (given standard data exchange media characteristics).

System characteristics

10. A computerized information system consist of:

   (i) hardware, i.e., the computer itself with different peripherals, such as memories, printers etc. The type and model should be decided by each centre to suit its specific requirements and conditions. Special consideration should be given to: inexpensive disc storage; drives with fixed and removable discs; tape station for external data exchange, servicing possibilities in the country.

   (ii) software, i.e., computer programmes for management and processing of the data. Which specific software, including programming language, that will be most convenient for each genebank will depend much on the type of computing machinery and the computing expertise that is available. Some genebanks may have the resources to write their own software and to update it as the genebank activities, and subsequently the data generated, grow. Others may use a general data base management system bought or rented commercially. Access to genebank specific computer expertise is to be recommended in any case. Whichever system is adopted, it is essential that the programmes are tailored to the users at any particular genebank for easy and comfortable entering of new data, editing of old data and above all, easy remodelling and revision of data bases.

11. Flexibility in system size is greater by storing the accessions sequentially as strings; there are certain table forms that should be avoided. The amount of data will inevitable grow; new characters, new descriptors will appear; the system, therefore, must be able to grow as well.

12. Most questions concerning genetic rsources collections are answered more efficiently by consulting listings of the sorted data in specified orders as compared to interactive repeated searching. Typically, the discovery of, e.g., a new disease resistance source results in a wave of questions concerning the same material or character in a short period of time.

13. Crop data bases should, if possible, be kept moderate in size. Descriptors in use only for a limited part of the accessions and/or of highly specialized kind may be better stored in specific result data bases.

14. Data on results relevant for only part of the accessions as well as repeated data on the same accession and descriptor are better kept in specific result data bases that can be added to chronologically. Likewise data from collection expeditions much of which is of great interest only to a limited group of users, should be kept as separate data bases. This also facilitates specific processing of such data.

15. Computerized production: Once a computer is used to handle the basic descriptors for a germplasm collection it rapidly becomes obvious that it has other uses. It can be used for producing:

- statistical analyses
- field maps
- labels for sowing, harvesting etc.
- recording forms
- catalogues of various kinds

16. Computerized co-ordination: Genebanks preserve not only standard varieties but also more sophisticated breeding material, e.g., male sterile material, or genetic material carrying, e.g., genes causing lethality or sterility. In such cases, the computerization of the entire process, as in tem 15, is extremely helpful.

17. Computerized genebank information is a new, rather specialized field of computer work. Considering the general applicability of programming and the diversity of machine makes involved, training in programming and related fields is better left to the individual genebanks. Trainingin specific genebank infromation problems is probably best arranged by giving the genebank information personnel possibilities to spend periods from a week to some months at other operating genebanks. Periodical symposia or meetings should then be arranged to follow up these experiences. It may be one of the more efficient ways of achieving input-output compatibility.

Conclusions

18. A genebank today will hardly manage without a computer based data information system. Several genebanks attempting to co-operate and exchange such computerized information will hardly manage without being input-output compatible; not necessarily all with all, but at least over some links in the chain.

When it comes, however, to the internal parts of each system it is not realistic, neither wanted, to aim at a uniformity of systems. The specific conditions prevailing at each genebank - and different institutes co-operating or being part of that genebank - must necessarily be tremendously different: e.g. plant species, geographic and climatic situation, history. It seems obvious that what is needed here is diversity - not uniformity. It then becomes that much more urgent and important that those details essential for achieving the input-output compatibility necessary for an interchange of data are standardized and agreed upon in common interest - and the main targets here must be:

- standard medium or media for data exchange
- standard speed or speeds for that medium (media)
- standard code or codes for that medium (media)
- standard descriptors
- objectively determined descriptor states

APPENDIX VI

(paragraph 31)

DESIGNATION AND RESPONSIBILITIES OF EUROPEAN CROP GERMPLASM CENTRES

The best means to promote effective functioning of conservation and exchange of germplasm for crops in Europe is a division of labour between institutions.

Basic reasoning and argumentation:

1. Utilize to the maximum extent available specialized knowledge and ambition.

2. Create mutual interest and build up confidence by making countries and sub-regions mutually dependent.

3. A network of stations is stronger and more lasting than confining responsibilities to a few institutions.

4. Since there is no extra budget to build one or a few centralized genebanks in Europe, it is more feasible to divide the extra work-load and thereby the required extra budget.

Requirements for an institution to become an European Crop Germplasm Centre for one or some crops :

1. Having already a comprehensive collection of the crop or crops concerned and willing to practise full and free exchange of materials;

2. Having specialized knowledge of the crop or crops concerned as a result of recognized past work;

3. Having adequate facilities for storing or in the case of vegetatively propagated material being able to co-ordinate a storage network; able to co-ordinate characterization and to carry responsibility for regenerating, multiplying and evaluating the crop or crops concerned;

4. Able to co-ordinate and accept responsibility for the documentation and exchange of material of the crop or crops concerned according to agreed principles;

5. Able to co-ordinate the organization of and/or participation in collecting expeditions to enlarge present collections;

6. Being situated in a country that is a member of the programme;

7. Publishing an index seminum or computer printout of collections

Based upon preliminary contacts and unofficial consultations and taking into consideration the IBPGR appointments of base or regional collections in European countries a first draft suggestion for this European network of crop germplasm centres is given by the secretariat in the attached listing. Several countries were not yet contacted, so that amendments will have to be made during or after the first Governing Board meeting.

When this scheme is accepted in principle, rules that will govern in more detail the requirements and the responsibilities of an European Crop Germplasm Centre will have to be drafted and agreed upon.

Suggested list of institutions which could take responsibility for certain crops

I. Cereals.

Triticum	- INRA - Versailles (France) - Bari (Italy) - Izmir (Turkey) - VIR Leningrad (USSR)
Hordeum	- Ruzyne (Czechoslovakia) - Gatersleben (DDR) - SVP Wageningen (Netherlands) - Nordic Genebank (Sweden)
Avena	- Lund (Sweden) - VIR Leningrad (USSR)
Secale	- Radzikow and Warsaw (Poland)
Zea mays	- INRA - Versailles (France) - Portugal - VIR Leningrad (USSR) - Belgrade-Zemum (Yugoslavia)

II. Root and Tuber Crops

Beta	- Greece - Braunschweig - Völkenrode (Federal Republic of Germany) - Radzikow (Poland)

Solanum tuberosum and related species	- German Netherlands Potato Department of the Genebank in the Research Centre for Agriculture at Braunchweig (Federal Republic of Germany) - Radzikow (Poland) - Scottish Crop Research Institute (UK)
III. Grain legumes	
Vicia species	- Gatersleben (DDR) - Bari (Italy)
Phaseolus Cultivars	- Braunschweig (Federal Republic of Germany) - Tapioszele (Hungary)
Phaseolus (botanical species)	- Gembloux (Belgium)
Pisum	- Gatersleben (Federal Republic of Germany) - Bari (Italy) - Nordic Gene Bank (Sweden)
Lupinus	- Madrid (Spain)
IV. Brassica species (fodder and vegetables)	- INRA - Versailles (France) - SVP and IVT Wageningen (Netherl.) - Wellesbourne (UK)
(oil seeds)	- Gatersleben (DDR)
V; Industrial Crops	
Gossypium	- Cotton Development International Paris (France) - Greece
Nicotiana tabacum	- Bulgaria - Greece
Helianthus annuus	- Bulgaria - Fundulea (Romania) - Novi Sad (Yugoslavia)
Linum usitatissimum	- Poland

VI. Forage Crops

Medicago, Trifolium Gramineae	- INRA - Versailles (France) - Tapioszele (Hungary) - Wageningen (Netherlands) - Radzikow (Poland)(not medicago) - Aberystwith (UK) - Romania (Fundulea) (Medicago)

VII. Fruits

Malus, Pyrus	- Belgium - INRA- Versailles (France) - UK
Prunus	- Bulgaria - Italy - Spain
Vitis	- Bulgaria - INRA - OIV (France)
Ribes, Rubus and Rheum	- Nordic Group

VIII. Vegetables

Allium	- Hungary - Wellesbourne (UK)
Lycopersicon	- Bulgaria - Hungary - Bari (Italy) - IVT - Wageningen (Netherlands) - Gatersleben (DDR)
Capsicum	- IVT - Wageningen (Netherlands)
Lactuca	- IVT - Wageningen (Netherlands)
Solanium melongena	- Wageningen duplicating Indian collection

APPENDIX VII

(paragraph 51)

GENETIC RESOURCES TRAINING

Training in genetic resources should ideally provide a good scientific understanding of the theoretical basis of the subject, as well as practical experience in the gene bank, and in the field.

A thorough training in all aspects of genetic resources work should include the following subjects.

1. Basic understanding of the genetics, taxonomy and evolution of crop plants and their wild relatives.

2. Field exploration and collection techniques, based on a thorough knowledge of population genetics, sampling methods, and practical collecting experience.

3. Conservation of seeds and other materials in gene banks. This includes a knowledge of seed physiology, testing for viability and field regeneration when viability falls below acceptable levels; tissue culture techniques.

4. Evaluation of materials for yield, nutritive contents, environmental adaptation, pest and disease resistance etc.

5. Utilisation of genetic resources through plant breeding.

6. Documentation methods.

7. Data storage and retrieval techniques, including the registration of accessions.

Training facilities in Europe should be flexible enough to offer all or part of the above subjects according to the needs and past experience of the trainees themselves. Thus some trainees will no doubt require a complete basic course in which all aspects of genetic resources work are dealt with, whilst others may benefit best from short courses of work experience in an already established gene bank. All these facilities are provided in some form or other in Europe, and no doubt more will become available in the near future.

Not all replies to the UNDP/FAO questionnaire on training have been received, but the following serve to indicate the facilities offered at present. An attempt has been made to set these down under various heads, as follows:

I. Full courses in genetic resources leading to a higher degree;

(a) Second and third cycle courses in genetic resources are given in the University of Paris XI within the framework of the certificate of genetics and the Diplome d'Etudes Approfondies, respectively. All tuition is in French.

(b) M.Sc. in Conservation and Utilisation of Plant Genetic Resources is offered at Birmingham University (U.K.). The course covers the whole field of genetic resources work and lasts for 12 months. It includes lectures, seminars, practical classes and a research dissertation. It now links with gene bank practice at N.V.R.S. Wellesbourne (see below, section IV (O). All tuition is in English (Leaflets available).

II. Special courses in genetic resources not leading to a higher degree in this subject.

(a) ORSTOM offers a 2-year course for Francophone personnel from Africa (and elsewhere?) in genetic resources. First year in Paris, with lecture and laboratory courses and a dessertation. Second year, either in Paris at ORSTOM laboratory near Orsay, or at the Ivory Coast studying evaluation of rice, coffeee and millets.

(b) A course on documentation, aiming to prepare students in the practical aspects of computers and the storage and retrieval of data on genetic resources is planned by the Germplasm Institute at Bari and the Centre for the Study and Application of Advanced Technology. Tuition in Italian and English.

(c) Birmingham University offers two courses, each of 3 months duration, on specific aspects of genetic resources training. These are modules taken from the M.Sc. course (see I(b) above). All tuition is in English. Course I. Crop plant diversity - its exploration and conversation (also includes evolution and taxonomy of crop plants, the genetical basis of variation, and taxonomic methods). Course II. Genetic resources evaluation, utilisation and data preparation and management. (This includes a full course on plant breeding objectives and techniques). Both courses include practical training and may be taken in conjunction with the N.V.R.S. Wellesbourne training (see below, section IV (O)). (Leaflets available).

(d) A course in seed technology for gene banks is offered by the University of Edinburgh, U.K.

III. Institutes offering practical field training.

(a) Agricultural Research Institute, Nicosia, Cyprus. Offers experience in the exploration and collection of genetic resources materials under field conditions for periods of a few weeks. Arrangements to be made at least 6 months beforehand.

(b) Research Centre for Agrobotany, Tapioszele, Hungary, will accept visitors for a few weeks or 2-3 months to study exploration and collection techniques.

(c) Agricultural Research Institute, Izmir, Turkey offers training in exploration and collecting techniques for 1-3 weeks for experienced visitors or 30-45 days for students.

IV Institutes offering practical gene bank training.

(a) Institute of Plant Introduction and Genetic Resources, Sadovo, Plovdiv, Bulgaria. Will accept visitors for 10-15 days on following subjects: collection techniques and methodology of seed testing, con ervation, evaluation and documentation.

(b) Research Institute of Plant Production, Prague, Czechoslovakia. Will accept visitors for 3-6 weeks.

(c) Gatersleben, German Democratic Republic.
Willing to organise workshops of 2-3 weeks (perhaps the first could be in 1982 or 1983), and to accept short-term visitors to gain practical experience in the fields of exploration and collection techniques, seed conservation methodology, evaluation and documentation.

(d) Braunschweig, German Federal Republic
Willing to accept trainees (not more than 2 at a time), over a period of 3 weeks in the following topics:

Increase of materials.

Maintenance of materials.

Documentation (information handling),

Data preparation for electronic processing (input).

Data organisation (file architecture).

Data preparation for output (printout of listings, data preparation for exchange).

Trainees should provide their own data.

(e) Cereal Institute, Thessaloniki, Greece.
Will accept short-term visitors in the near future.

(f) Research centre for Agrobotany, Tapioszele, Hungary.
Can accept visitors for a few weeks or 2-3 months to study seed conservation methodology, tissue culture techniques, evaluation and (from end of 1981) computerised documentation systems.

(g) Various Institutes in Ireland.
Short-term visitors accepted.

(h) Germplasm Institute, Bari, Italy.
Will accept visitors for short training periods in all aspects of gene bank work.

(j) Plant Breeding and Acclimatization Institute, Radzikow-Warsaw, Poland. (also Institutes at Bydgoszcz, Bonin, Skierniewice, etc).
Short-term visits of 2-3 months for training in taxonomy conservation methodology and documentation.

(k) Department of Genetics, Estacao Agronomica Nacional, Oeiras, Portugal.
Would accept visitors.

(i) Nordic Gene Bank, Lund, Sweden.
Visitors accepted for a few weeks, and also for documentation.

(m) Federal Agricultural Research Station, Nyon, Switzerland.
Will accept trainees for 2-3 weeks in June or July, giving basic information on management and evaluation of collections.

(n) Agricultural Research Institute, Izmir, Turkey.
Can train short-term visitors (1-3 weeks for experienced visitors, 30-45 days for students) in seed conservation, tissue culture, evaluation and documentation.

(o) National Vegetable Research Station (N.V.R.S.), U.K.
short periods of training, either alone or linked to course at Birmingham University (see above, sections I(b) and II (c).

(p) U.S.S.R.
Study tours for trainees may be arranged if the plans are submitted two years in advance.

V. Universities which teach courses in plant breeding and/or genetics in which genetic resources forms a component part.

(a) University for Forestry and Wood Processing Industry. Sopron, Hungary.

(b) University College, Dublin, Ireland.

(c) Italian Universities of Bari, Naples, Perugia, Padova, Turin and Pisa.

(d) Agricultural University, Wageningen, Netherlands.
International 3 months' course in plant breeding organised by the International Agricultural Centre.

(e) University of Agriculture, Warsaw, and Academy of Agriculture Poznan, Poland.

(f) Department of Plant Breeding, Swedish University of Agricultural Sciences, Uppsala, Sweden.
M.Sc. Course in Plant Breeding (also at Svalov).

(g) University of Cambridge, U.K.
Plant Breeding M.Sc. course at the Department of Applied Biology.

Note : It is assumed that the courses are given in the languages of the countries concerned.

VI. Ph. D. Studies in genetic resources.

Many questionnaire replies state that students can be accepted to study for Ph.D. degrees in subjects related to or incorporating genetic resources themes. These are listed as follows:

Paris (France); Thessaloniki* (Greece); Dublin (Ireland); Bari, Naples. Perugia, Padova, Pisa (Italy); Wageningen (Netherlands); Radzikow and Posnan (Poland); Lisbon (Portugal); Birmingham (U.K.).

*Not available at present, but planned for the near future.

VII. Seminars for Gene Bank Directors

These will be discussed by the Scientific Advisory Committee with a view to bringing forward proposals at the next meeting of the Governing Board.

APPENDIX VIII A and B

(paragraph 62)

VIII A: TEXT OF LETTER FROM RAPPRESENTANZA PERMANENTE D'ITALIA PRESSO LE ORGANIZZAZIONI INTERNAZIONALI, DATED 16 DECEMBER 1980, SIGNED BY THE PERMANENT REPRESENTATIVE

VIII B: TEXT OF ORALLY MADE STATEMENT TO THE GOVERNING BOARD OF ECP/GR BY THE REPRESENTATIVE OF THE GOVERNMENT OF SWITZERLAND

APPENDIX VIII A
(paragraph 62)

RAPPRESENTANZA PERMANENTE D'ITALIA
PRESSO LE ORGANIZZAZIONI INTERNAZIONALI

10, CHEMIN DE L'IMPÉRATRICE
GINEVRA

n.2862

Geneva, 16 DEC. 1980

Sir

the Italian Government follows with great interest the important steps taken up to now by the European Cooperative Programme on Crop Genetic Resources in order to improve its action.

Because of that and as a step towards to assure to the Programme better conditions for the implementation of the phases already decided and of those ones which have to be taken for the future, the Italian Government would suggest to transfer the Secretariat of the Programme from Geneva to Rome. There is no doubt that such a decisio would help the Programme to have easier consultations with FAO and IBPGR.

On this respect I can anticipate to you that the Italian Government is ready to support all expenses relating to it.

Looking forward to know the decision the Governing Bod will take regarding the italian proposal, accept Sir the assurance of my highest consideration.

Vittorio CORDERO di MONTEZEMOLO
Permanent Representative

Dr.C.de BAKKER
Executive Secretary
Genetic Resources Project
UNDP - Palais des Nations

APPENDIX VIII B
(paragraph 62)

DECLARATION OF THE SWISS DELEGATION TO THE GOVERNING BOARD OF ECP/GR:

The Swiss Confederation is ready to offer seat for the Secretariat of ECP/GR in the premisses of the Station Fédérale de recherches agronomiques in Changins. This Institute is situated in Nyon, approximately 25 km from Geneva. The geographical situation guaranties for easy connexion to all international organizations in Geneva, and in particular to the UNDP and UPOV.

We are able to offer the Secretariat moderne and confortable offices, reliable facilities regarding telecommunications as well as conference rooms equipped for simultaneous translation.

By this proposition the Swiss Confederation intends to offer the Secretariat the very best possible conditions for its' work, and accordingly it will contribute to the success of the Project.

APPENDIX IX

(paragraph 71)

WORK PLAN 1981

FOR EUROPEAN CO-OPERATIVE PROGRAMME ON

CROP GENETIC RESOURCES

Programme Activity No 1.

1. Taking into account the activities of sub-regional groupings and the IBPGR, the designation of and assistance in operating European Crop Germplasm Centres, forming together a funcitonal European network on Crop Genetic Resources Institutions.

Sub-Activities

1.1. Designation for each crop of one or more European institutes, which accept to act as leading centres for the conservation, rejuvenation and multiplication, evaluation, documentation and related activities of the Genetic Resources of the crop(s) concerned.

1.2. Drafting of requirements and rules for the European Crop Germplasm Centres.

1.3 Advising on and assisting in perfecting or improving equipment and facilities of these centres.

1.4. Advising on and assisting in extending their Germplasm Collections and exchanging material and data with other Gene Banks.

Programme Activity No 2.

2. Recording and assisting in collecting activities of seed-propagated and vegetatively-propagated crops, namely wild species, land-races and primitive populations, old cultivars and presently used cultivars.

Sub-Activities

2.1. Recording collection activities of European countries and making reports on the collected material generally available.

2.2. Stimulating joint expeditions between countries, whenever feasible, also by aiding those financially, through contributions in kind or cash from the Programme budget.

2.3. Studying what gaps exist in which countries, in order to formulate a long term plan for the completing of collections for the different crops in Europe.

2.4. Drafting and improving Collection Manuals and initiate and support financially training in collection activities.

Programme Activity No 3.

3. Characterization and evaluation of crop germplasm material, newly collected or already present in collections.

Sub-Activities:

3.1. Promotion of evaluation of germplasm material available in individual collections and publication of its results.

3.2. Promotion of characterization of recently collected germplasm material and publication of its results.

3.3. Organization of joint evaluation trials, whenever feasible for special purposes and publication of its results.

3.4. Assist crop germplasm centres to collect information on evaluations done elsewhere in order to complete their documentation of the germplasm of the crop(s) they are responsible for.

Programme Activity No 4.

4. Promotion of design and utilization of information and documentation systems, aimed at facilitating free exchange of germplasm material and data.

Sub-Activities

4.1. Promotion and utilization of minimal number of descriptors for crops and of standardization of descriptor terminology and taxonomic nomenclature, aimed at better input-output compatibility.

4.2. Advise to genetic resources institutions on computer hardware and software to handle the data of their collections.

4.3. Promote and assist in preparation and exchange of Crop Germplasm Catalogues, either in printed form or on tapes or other adequate equipment containing all relevant information on accessions present in European institutions.

Programme Activity No. 5.

5. Training and exchange of knowledge and personnel

Sub-Activities:

5.1. Collect information on existing possibilities for education and training for scientists from other countries.

5.2. Collect information on needs regarding education and training in aspects of genetic resources work.

5.3. Collect information on needs and possibilities regarding exchange of personnel between gene banks.

5.4. Organize work-shops on selected timely subjects.

Programme Activity No. 6.

6. Research on important problems related to genetic resources management and exchange.

Sub-Activities

6.1. Promote interest in research projects regarding problems on conservation regeneration and multiplication of seed-propagated and vegetatively-propagated plant species (e.g. cell and tissue culture).

6.2. Promote interest in research projects regarding problems connected with plant quarantine measures and their influence on the free movement of plant parts of germplasm.

6.3. Encourage at appropriate institutes research on improvement of germplasm, by increasing the preferred characters and decreasing the bad characters (management of the genetic variability).

Programme Activity No 7.

7. Promotion of contacts between plant-breeders and personnel of gene banks.

Sub-Activities:

7.1. Promotion of contacts on evaluation - data of accessions which are of interest ot plant-breeders.

Programme Activity No 8.

8. Preparation and publication of a directory of germplasm institutes with particulars of :- a) manpower;

b) facilities;

c) data by which institutes characterize their collections.

Supporting Activities:

A. Annual meetings of Governing Board of ECP/GR

B. Annual meetings of Scientific Advisory Committee of ECP/GR

C. Visits of the Executive Secretary to national Genetic Resources institutions in European countries.

D. Contacts with national co-ordinators, sub-regional Genetic Resources organizations and with IBPGR and EUCARPIA.

E. Establishment and meetings of working groups, e.g. to organize and co-ordinate the activities of European Crop Germplasm Centres.