AGPG/IBPGR/~~84/85~~ 85/4

UNDP/IBPGR EUROPEAN COOPERATIVE PROGRAMME

FOR

CONSERVATION AND EXCHANGE OF CROP GENETIC RESOURCES

PHASE II

REPORT OF THE SECOND MEETING OF A

TECHNICAL CONSULTATIVE COMMITTEE

Oeiras, Portugal, 3-5 December 1984

International Board for Plant Genetic Resources
Rome, 1984

C O N T E N T S

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INTRODUCTION

1. The Technical Consultative Committee (TCC) held its second meeting on 3-5 December 1984, at the Estacao Agronomica Nacional, Oeiras, Portugal by kind invitation of the Director, Dr. J. V. Carvallo Cardoso at the suggestion of the ECP/GR Country Coordinator, Dr. M. Mota.

2. A list of participants is shown in Appendix I. The participants consisted of invited members and of the Chairmen of the ECP/GR Crop Working Groups. Apologies for absence were received from Dr. Czembor, from UNDP, from the Chairman of IBPGR and from observers from EUCARPIA and UPOV.

3. The Committee elected Dr. E. Kjellqvist as Chairman. The agenda, as approved, is shown in Appendix II.

4. Dr. Mota welcomed the TCC on behalf of the Director of the Institute and Dr. Williams, IBPGR:ECP/GR Executive Secretary, made an opening statement on behalf of UNDP and IBPGR outlining the purpose of the meeting. In addition he provided details of the country contributions received in 1984, informed the participants that the Republic of Ireland had recently joined the programme and that Romania, contrary to expectations, had not. He emphasized the limited time remaining in Phase II and urged the TCC to develop practicable recommendations which would permit the objectives of this phase of the programme to be fulfilled by June 1986. He reminded the meeting that both UNDP and IBPGR expected evidence that substantial cooperative work was in progress.

R E P O R T

REVIEW OF ACTIVITIES

5. Barley: The Chairman of the Working Group, Dr. C. Lehmann, presented a report of the work carried out during the past year (Appendix III). Subsequent to the meeting of the Working Group in May 1983 and to the discussions of the first meeting of the TCC in December 1983, the following decisions had been taken by the Secretariat in agreement with the central data base at ZIGuK, Gatersleben, DDR:

5.1 (i) Dr. S. Blixt, consultant ECP/GR, has agreed to assist ZIGuK in the registration of data in machine-readable form and in the identification of putative duplicate accessions prior to the preparation of a preliminary European Barley List (EBL).

(ii) ZIGuK had agreed with the Secretariat that a draft EBL would be available by the end of 1984.

(iii) ZIGuK had received by early 1984 a microcomputer and software. This was supplied from IBPGR core funds, in view of the importance of the EBL to the IBPGR global barley programme. Evidence of the latter was provided by the Ethiopian Plant Genetic Resources Centre providing IBPGR with machine-readable data for merging with the EBL.

(iv) The Nordic Gene Bank had agreed in October 1984 to provide additional software to ZIGuK for data base management.

5.2 Although data (in various formats) had been received from 17 countries as well as from the Nordic Gene Bank, it was reported that data from Israel and Portugal were lacking and those from some other countries e.g. Italy, may be incomplete. A magnetic tape from Bari, sent at the end of October 1984, had not been received by Dr. Blixt. The Secretariat was asked to obtain a quick response from Israel and to request France to provide machine-readable data. Data had not been sent from Switzerland because it was already registered in FAL, Braunschweig, FRG, and transferred from there to the central data base.

5.3 The TCC appointed a group of three (Drs. Lehmann, Blixt and Galanopoulou) to assess in detail the progress reported by Dr. Lehmann and to produce a series of detailed recommendations for consideration by the TCC.

5.4 The following proposals for immediate action from the group were endorsed by the TCC:

(i) The principal constraint at the moment is that sufficient information has not been received from Israel, France and Italy, all countries with significant collections. The national coordinators in those countries are urged to ensure the provision of this information before January 31, 1985. When possible the information should be provided on a 1600 bpi magnetic tape and failing this, as printout or, if no other possibility exists, as a legibly written list.

(ii) The information so far received is now stored on hard disks, both in the form in which it was received and, after transformation, into a standard descriptor format. This information is ready for circulation to donor institutes for immediate correction. The corrected information sheets should be returned as soon as possible to Dr. Blixt so that as many corrections as possible can be included in the first edition of the EBL draft to be circulated at the end of January 1985. This draft will list accessions in alphabetical order, with accession name as first, country of origin as second and donor country as third sorting criteria.

(iii) The registered data will permit the identification of possible duplicates. For a more precise identification of duplicates characterization data will be needed on the following characters:

a) number of rows of spikelets (syn. row number, convariatas);

b) seasonality (syn. growth habit, endurance, habitus, sowing time);

c) principal attribute descriptor.

Available information on these descriptors should be forwarded as soon as possible to Dr. Blixt for inclusion in the EBL.Characterization work on these and other descriptors should begin in 1985 so that data may be included in the data base as soon as possible. Final decisions on duplicates can only be made on the basis of adequate characterization data.

(iv) A second sorting on the basis of the six criteria mentioned above will lead to the production of a second draft EBL in April 1985. This would contain the first information on 'possible

duplicates'. A European Barley List will be printed by the end of October 1985.

(v) Further action to be taken immediately after the publication of E.B.L.

a) The rationalization of collections, by selective elimination of unwanted duplicates, making possible the considerable reduction of costs of regeneration and storage.

b) The identification of unique accessions of particular importance to characterization.

c) The analysis of accessions according to geographical origin to detect gaps in relation to distribution range.

6. Prunus: Professor Fernqvist, Chairman of the Prunus Working Group provided a report on the progress made since the meeting of the Working Group in May 1983 (Appendix IV). The TCC noted that a number of countries had not responded to the questionnaires sent by the Secretariat. In addition those received were often incomplete in respect of data on the origin of the materials and on the comprehensiveness of the collections. Nevertheless, a draft list of Prunus avium in collections has been produced by the Cherry Coordinators at IHAR, Radzikow, Poland

6.1 The TCC noted with dismay that recommendations on priority emergency collecting (Appendix VI of the Report of the Working Group) had not stimulated any action by FRG, Italy, France, and other Mediterranean countries. It was noted however that the IBPGR had funded the collection of Prunus in Greece which included some bitter almond. For priority 2 collecting, Turkey had informed the Secretariat that wild populations of apricots and almonds would be included in the national collecting programme. Hexaploid P. domestica and P. insititia in Yugoslavia are being collected with IBPGR support. The TCC requested that reports on the work in Greece and Yugoslavia be circulated by the Secretariat.

6.2 The Secretariat informed the TCC that the descriptor lists for cherry apricot, almond, peach and plum are about to be published. It was agreed that advance copies should be sent to national coordinators and curators.

6.3 The TCC recognized that the gathering of data on existing collections takes no account of genotypes which can still be found in gardens and small holdings. This led to a discussion of how to describe the genepool of Prunus not represented in the collections. It was emphasized that eco-geographical data are required. It was agreed that in the immediate future, extensive seed samples from this type of material should be obtained and stored in genebanks.

6.4 In addition, wild material has to be assessed for its safety. A proposal was agreed for reviewing the state of knowledge on such material already in nature reserves (see para. 15) and the Secretariat was asked to approach the crop coordinators to develop minimum lists of descriptors for survey cards to be used for scoring diversity of wild populations.

6.5 The TCC appointed a group of three (Drs. Fernqvist, Populer and Mr. Perret) to assess progress, in the light of recommendations in paras 10-13, and to produce guidelines for future action.

6.6 The TCC endorsed the following recommendations produced by the group:

(i) The European Prunus Lists (EPL) for apricot, almond, plum, peach and cherry and other species should be circulated by February 1985 to all curators for checking, and supplementation as required. Final lists should be published by April 1985.

(ii) Immediately after publication of the preliminary lists, the registration of full available data should proceed. Where data is available on an accession from more than one source, the data from the country of primary origin should be registered.

(iii) The Secretariat should prepare a series of maps showing the distribution of European national nature reserves, and the distribution of wild Prunus species. Wherever possible the Secretariat should promote the description of diversity of Prunus populations in these reserves.

(iv) The Secretariat is asked to promote the collection of the diverse genotypes to be found in gardens and small holdings. Since it appears that action is already being taken in some countries, information on it should be obtained and circulated by the Secretariat to national coordinators, national authorities and Prunus workers in other countries to stimulate their work.

7. Forages: A Working Group on Forage grasses and legumes had been held at the Fodder Crops and Pastures Institute, Larissa, Greece, 7-9 February 1984 and the report had been previously circulated. The Chairman, Dr. J. H. W. Holden, highlighted the major recommendations and drew attention to the fact that 9 species data bases had been agreed by the end of August 1984 (Appendix V).

7.1 The Secretariat had distributed questionnaires requesting basic passport data, but an assessment made on 25 October showed a very poor return from countries.

7.2 The Working Group report identified numerous urgent collecting requirements. As far as the Secretariat could ascertain no specific action had ensued by countries. The TCC was informed by individual members of the following proposed actions:

(i) Poland and the U.K. will collect red clover in Poland in 1985.

(ii) Greece, with IBPGR support, is continuing its collecting programme for forages.

The TCC agreed to include Austria as a priority for the collection of red clover, Lolium multiflorum and L. perenne (in natural habitats). In this respect there is a possibility that some old Austrian landraces of red clover may exist in the Hungarian genebank following seed exchange in the 1960's. Dr. Holly stated that most red clover cultivars had been collected in Hungary and all passport data will be computerized within a year.

7.3 Other items of information included:

(i) France has duplicated 5 landraces of Medicago for safe storage in Hungary.

(ii) A Eucarpia programme on Medicago will multiply in 1985 seed of European landraces in their areas of origin for conservation and evaluation. This is coordinated by Dr. M. Guy, of Station d'Amelioration des Plantes Fourrageres et Laboratoires Associes, INRA, Lusignan.

7.4 The TCC strongly recommended that for genebank purposes, sufficiently large quantities of high quality seed should be stored to avoid costly and unecessary regeneration. Furthermore the Executive Secretary was asked to request his Forage Officer to produce a status report on the need for the collection and conservation of strains of Rhizobium. In this respect there should be liaison with the ECC Medicago programme.

7.5 A training course, proposed by the Working Group, had taken place in October 1984 at WPBS, UK. The TCC asked for its appreciation to be recorded in view of the enthusiastic reports which had been made by those attending the course.

8. Allium: A Working Group had met 29-31 May 1984 at the Research Centre for Agrobotany, Tapioszele, Hungary, and the report had been circulated. The Chairman, Dr. D. Astley, reported on action since the meeting (Appendix VI). Replies to questionnaires had recently been received from Austria, France, Greece, Hungary, Poland and the U.K. The Nordic Countries are currently collecting information.

8.1 Designations by IBPGR of seed genebanks and field genebanks had all been accepted by the institutes proposed by the Working Group.

8.2 The TCC noted that the Working Group had not given any priority to Allium shoenoprasum (chive) and the Chairman agreed to stimulate work. In addition the Chairman accepted a recommendation of the TCC that the wild genepools in Europe will receive attention and their risks of erosion will be assessed.

9. Sunflower: A Working Group had met in the Institute of Field and Vegetable Crops, Novi Sad, Yugoslavia, 20-23 July 1984 and the report had recently been circulated. The Chairman, Dr. D. Skoric, drew attention to the highlights of the report (Appendix VII) and noted that a draft list of descriptors was circulated worldwide for comments.

9.1 In view of the benefits of mutual cooperation the Executive Secretary was asked to approach the US national programme to effect a memorandum of understanding between USDA and the ECP/GR for the collection of wild sunflower species.

10. Oat: A Working Group had met in ARARI, Menemen, Izmir, Turkey, 25-27 September 1984 and the report had recently been circulated and in addition was tabled at this meeting. The Chairman, Dr. J. H. W. Holden drew attention to the principal recommendations of the Working Group.

10.1 The TCC noted that for the genus Avena there are clear and urgent collecting requirements for a number of wild species in the Western Mediterranean. A discussion ensued on species other than A. sativa which have been cultivated in Europe in the past and which may still exist as relicts. For example it is known that A. strigosa survives in pockets of cultivation in E. Poland and collecting is proposed in 1985. Austrian material of A. strigosa and A. nuda are in collections. The TCC drew attention to the possible value of diploid fodder oats to animal production systems in Ethiopia.

OTHER ITEMS

11. Workshop on Exchange of Information: Several of the ECP/GR Working Groups had requested the Secretariat to convene a Workshop to consider what constraints limit the ready exchange of machine-readable data. This was held 23-25 October 1984 at the IHAR, Radzikow, Poland. Dr. S. Blixt reported on the major conclusions and recommendations. These were discussed by the TCC, were amended as necessary and are shown as endorsed in Appendix VIII. The TCC expressed its gratitude to IHAR, Radzikov, for hosting the Workshop and accommodating the 27 participants as input-in-kind to the ECP/GR. In the course of the discussion the TCC reached the conclusion that it is essential that all crop data bases should as a matter of routine make a daily working back-up and should provide a six montly machine readable copy to the IBPGR for security purposes.

12. In situ conservation of wild relatives of crops of concern to ECP/GR: At the meeting of the TCC held in Nyon in December 1983, the Secretariat of ECP/GR was asked to prepare a short discussion paper on in situ conservation in relation to the European programme. An attempt is made in the following paragraphs to summarize information on this subject, including relevant policy decisions of the IBPGR. The European Programme is actively concerned with six crops or crop groups, namely Barley, Prunus (Almond, Apricot, Cherry, Peach and Plum), forage grasses and legumes, Allium, sunflower and Avena. It has been shown recently from IBPGR supported research by Ellis and Hong (in publication) that seeds of Prunus species are not desiccation sensitive and that, contrary to popular belief in some quarters, it is possible to store them successfully at low temperatures with moisture contents of about 5 per cent. The other five crops of course all have seeds with orthodox seed storage characteristics. Thus, with the exception of certain forms of Allium which are sexually sterile, all forms of all six crops which are the responsibility of ECP/GR are capable of being successfully stored ex situ and therefore conservation in situ is not essential for their genetic conservation.

12.1 It is necessary to recognize at the outset that the principle of in situ conservation can be sensibly applied only to wild species. Cultivated and weedy forms are of course man dependent and their survival in situ would require the simultaneous preservation of archaic farming systems with socio-economic consequences beyond the scope and influence of ECP/GR.

12.2 A reason frequently advanced in support of in situ conservation is that the natural course of evolution may continue. While this may be true for many species, it is not necessarily so for all. For example growth form, tillering and reproductive behaviour in forage grasses and legumes can be greatly influenced by the selection pressure of grazing intensity. Management policies of in situ reserves, of which grazing control is one aspect of particular importance to forage species, inevitably influence gene frequencies.

12.3 An attractive argument for in situ conservation of tree species with a juvenile phase such as Prunus, is that it provides instant access to budwood for grafting or to pollen for hybridization. Thus the delays of several years which are inherent in the utilization of material conserved ex situ are avoided.

12.4 In summary it seems that some practical advantage can be discerned in the in situ conservation of wild population of Prunus species (and Malus and Pyrus also)

12.5 In order to produce a rational plan of action for wild forms of Prunus within the context of the ECP/GR a step by step approach was agreed;

(i) A survey of the location and size of existing nature reserves, national parks and similar areas where conservation is practised, is required. It is known that they exist in many countries. An up-to-date survey is required since it is known that a steady progression of new sites is being defined. The Conservation Monitoring Centre of IUCN should be asked to computerize the data when available. Schlosser (unpublished paper) describes the existence of 761 reserves with a total area of more than 100,000 hectares in the DDR and that inter-alia they are mapping the distribution of 24 forage crop species and 27 fruit species in these reserves. This work is expected to be completed by 1986.

(ii) Complementary to point 1 above, to map the pan-European distribution ranges of the various Prunus species.

(iii) Considering the results from (i) and (ii) above to produce an estimate of the extent of existing in situ conservation in relation to the eco-geographical range of the species and to draft a plan of action of what remains to be done. The TCC recommended that the Executive Secretary use consultancy funds of ECP/GR to activate the above procedures in relation to Prunus and also in relation to Allium and major species of forage grasses and legumes.

13. Mobilization of Public Opinion: The first meeting of the TCC held in 1983, recommended that at its next meeting it should discuss the question of how to arouse public interest in genetic conservation and in particular the location and rescue of old cultivars to be found in farms and gardens.

13.1 The Chairman asked Dr. Populer, in view of his lengthy work on old fruit cultivars of Belgium, to speak to the meeting and lead a discussion. His views were summarised in a paper which he tabled (Appendix VIII).

13.2 The TCC accepted the recommendation that the Secretariat should produce non-technical articles to arouse public interest in genetic conservation for distribution to Country Coordinators for translation into their languages and for subsequent wide distribution. This exercise should be carried out as an input-in-kind. The Secretariat informed the meeting that a brochure on the work of ECP/GR was in press and would be distributed shortly.

It was suggested that Country Coordinators endeavour to interest their post offices in the issue of a series of postage stamps featuring genetic resources conservation.

14. In considering the rate of progress in achieving the objectives defined in the recommendations of the various Working Groups, and having in mind the limited time remaining in Phase II of the Programme, the TCC identified two general but critical impediments to progress:

(i) It is apparent that despite explicit undertakings in the Project Document or Letter of Agreement which were signed by countries on joining the programme, in a number of cases governments appear to be unable to provide fully the necessary inputs-in-kind (as defined on pages 8 and 9 of the Project Document) for the impetus of the programme to be maintained, and

(ii) there is insufficient interaction between the official country coordinators and the ECP/GR Secretariat. For example it would be of great help to the latter if country coordinators would alert the Secretariat as soon as it becomes apparent that impediments to progress exist, so that the Secretariat can fulfil its central role of keeping the work moving forward.

The TCC emphasizes the importance of the role of the Country Coordinators and while recognizing the many competing claims on resources, urges them to be more active in their countries in pressing for the provision of necessary inputs-in-kind.

APPENDIX I

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APPENDIX II

A G E N D A

I. GENERAL

1. Opening Statements

2. Election of Chairman

3. Adoption of Agenda

II. REVIEW OF CURRENT ACTIVITIES

4. Barley Working Group: Review of progress and of constraints in implementation of recommendations of Barley Working Group Meeting.
Presentation by Chairman: Dr.C.Lehmann

5. Prunus Working Group: Review of progress and of constraints in implementation of recommendations of Prunus Working Group Meeting.
Presentation by Chairman: Prof.I.Ferngvist

6. Forages Working Group: Review of progress and of constraints in implementation of recommendations of Forages Working Group Meeting.
Presentation by Chairman: Dr.J.H.W.Holden

7. Allium Working Group: Review of progress and of constraints in implementation of recommendations of Allium Working Group Meeting.
Presentation by Chairman: Dr.D.Astley

8. Sunflower Working Group: Review of progress and of constraints in implementation of recommendations of Sunflower Working Group Meeting.
Presentation by Chairman: Dr.D.Skoric

9. Oat Working Group: Review of progress and of constraints in implementation of recommendations of Oat Working Group Meeting.
Presentation by Chairman:.....Dr.J.H.W.Holden

III SPECIFIC TOPICS

10. Workshop on Exchange of Information.
Presentation of recommendations by: Dr.S.Blixt

11. In situ conservation of wild relatives of crops of concern to ECP/GR.

12. Mobilization of public opinion (including practical involvement of the public in the preservation of fruit tree genetic resources).

13. Any other business.

14. Adoption of report of the Meeting and its recommendations.

15. Closing of the Session.

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APPENDIX III

REPORT ON BARLEY WORKING GROUP ACTIVITIES

by

Dr. C. Lehmann, Chairman

The work on barley within the ECP/GR was initiated by the meetings of two Working Groups held in the ZIGuK at Gatersleben, GDR, on 3 - 4 February, 1982 and 18 - 19 May 1983. The discussions in both of these meetings covered the wide range of activities in conservation, documentation, data handling and exchange of material of genetic resources of barley.

The first meeting during Phase I (1980-1982) established some of the principles for cooperation while the second meeting was action-orientated (for details cf. Report of a Working Group on Barley 18 - 19 May 1983).

First priority was given to the production by the "lead institute" of a Catalogue of European Barley Genetic Resources and to the establishment of a central data base (in the first instance of passport data) for the barley genetic resources in Europe.

Recording Barley Genetic Resources in Europe for the Central Data Base

1. It is estimated that approximately 85,000 barley accessions were held in European collections at the beginning of the 1980's. Some 60 per cent may be maintained in more than two collections while some occur in most collections (cf. Report Barley Working Group Meeting 1983).

2. Passport data of 28,000 accessions have been received at Gatersleben from eight countries on computer printouts or on collecting forms by the end of 1983 (cf. TCC Meeting Report 1983).

3. By mid-October 1984, passport data of 29,000 accessions had been received at Gatersleben. Additionally, there are 9,700 accessions from the Gatersleben collection. From these 38,700 accessions 10,400 have data in computer readable form (on NGB IRS-83 diskettes)while that from the other 28,300 is on computer print outs, typed or handwritten lists, or on collection forms (Table 1)

According to additional information (P.M. Perret's visit on 19-21 September 1984) data on a total of 42,500 accessions are now available for the central data base, or on about one half of the estimated European holdings.

The missing data relates to major collections to which there is no access, e.g. the N.I. Vavilov Institute in Leningrad (17,500 accessions) and to material in the many small breeders collections.

Catalogue of European Barley Genetic Resources

4. The target date for the production of the first European Catalogue of Barley Genetic Resources was fixed at the TCC Meeting in 1983 as 1985, (cf. Report TCC-Meeting 1983, paragraph 13).

In order to achieve this target the following arrangements were made.

4.1 The Country Coordinators were asked by the Project Office, Mr. P.M. Perret, in the first months of 1984, to see that passport data are sent as far as possible on magnetic tapes (or diskettes). The answers were summarized by the Secretariat in a letter to the ZIGuK on 30 April 1984.

4.2 The Executive Secretary, Dr. J.T. Williams, proposed that a provisional European Inventory be produced up to the end of 1984 after a visit of the Project Officer, P.M. Perret, and the IBPGR Information Officer, J. Konopka, to the Nordic Gene Bank on 16-18 April 1984.

Dr. S. Blixt, Weibulls Seed Company, Landskrona, offered his personal help in reading all data (from tapes or floppy disks) on to his WANG computer,to sort the accessions and to produce a print out of the provisional European Inventory by alphabetical order of accessions names. A sorted tape and sorted floppy disks will be given to the ZIGuK to establish the central data base.

4.3 Accordingly passport data of 10,400 accessions (DDF, YUG) will be sent from Gatersleben to Dr. Blixt or Dr. Yndgaard on NGB IRS-83 diskettes. Magnetic tapes or diskettes with data of 5,000 accessions (CSK, HUN, POL) have been sent to Dr. S. Blixt directly or via the IBPGR-Secretariat. Data of another 17,000 accessions (DEU, FRA, partly, GBR, ITA) are expected to be sent to Dr. S. Blixt (information from P.M.Perret and J. Serwinski on 19-21 September 1984).

According to information given by P.M. Perret on 19-21 September 1984 data of an additional 4,100 accessions (BGR, ESP) have been sent to the IBPGR-Secretariat on tapes, or diskettes and data on 550 accessions are expected later in magnetic form (NGB, TUR).

The ZIGuK will transfer passport data of 500 accessions (AUT, CYP, GRC, NLD, partly) on to NGB IRS-83 diskettes by the end of 1984.

Thus, passport data of 37,500 accessions can be included into the provisional European Inventory at the end of 1984.

The passport data of 5,000 accessions (BEL, FRA, partly, NLD, partly) on typed or handwritten lists will be included in the central data base directly at the beginning of 1985.

4.4 During the visit of the Project Officer, Mr. P.M. Perret, to the ZIGuK on 19 - 21 September 1984 it was suggested that two lists be printed, a complete one (provisional European Inventory) and one for each country/institution contributing to the Inventory. This would facilitate the proof-reading and implementation of the Inventory.

It was confirmed that the distribution of the provisional European Inventory will be done by the ECP/GR Secretariat.

5. The following time schedule for the production of the first European Catalogue of Barley Genetic Resources in 1985 is considered to be feasible;

January, end of:	distribution of the provisional European Inventory by ECP/GR Secretariat.
February-April:	proof-reading and complementing by contributing institutions.

May-July: transfer of the corrections and complements on to the central data base.

August-October: printout and copying the catalogue.

European Central Barley Data Base

6. The passport data of the Gatersleben Barley Collection were punched on to paper tapes with a data format suited to the requirements of the former Gatersleben data handling programmes and prepared for transformation on to magnetic tapes in 1981 - 1982.

These passport data had to be registered on to NGB IRS-83 diskettes once more in another form to fit with the NGB IRS-83 and the requirements formulated by F. Yndgaard and J. Konopka (cf. paragraphs 8 - 10). Also some descriptors had to be modified. The registration was finished on mid-October 1984.

7. The passport data with their given format from the computer printouts of the Federal Republic of Germany (Braunschweig), United Kingdom (PBI and SCRI) and Italy (Bari) were punched and prepared for transferring on to magnetic tapes at the ZIGuK in 1983 - beginning of 1984.

8. A micro-computer NGB IRS-83 was provided through IBPGR to the ZIGuK in mid-February 1984 in order to accelerate the registration of data and the compilation of the European Barley Catalogue. The Nordic Gene Bank agreed to transfer data received on magnetic tapes on to NGB IRS-83 diskettes to assist ZIGuK.

9. Dr. F. Yndgaard, Nordic Gene Bank, visited ZIGuK on 16 - 20 January 1984. He discussed technical problems with Dr. H. Knupfer. They prepared a detailed description of the lay-out of information to be recorded on NGB IRS-83 diskettes. In his report to IBPGR, F. Yndgaard proposed to use this data structure for all barley data within the ECP/GR network.

10. This proposal was found to be difficult to follow by other gene banks than the Nordic Gene Bank. It seemed to be more practical to do a little more programming work in the centre which received the tapes than to demand this work from a sender. Therefore, a new version was prepared by J. Konopka, IBPGR Information Officer, in agreement with F. Yndgaard on 12 April 1984.

11. The ZIGuK is in discussion with the "Institut fur Informatik und Rechentechnik" of the Academy of Sciences of the GDR in Berlin to obtain their active support (hardware and software) for the management of the European Central Data Base. An agreement should be reached not later than end of 1984. The institute has an ESER 1055 computer, and a data base management system has been installed recently.

The data bank structures for the European Barley Data Bank will be defined by the end of 1984. Thus, it will be possible to include the data from Dr. S. Blixt's magnetic tapes into the data bank in Berlin after its transformation from 1600 bpi into 800 bpi at Radzikow at the beginning of 1985.

12. It was agreed during discussions with P.M. Perret, Project Officer, during his visit in ZIGuK on 19 - 21 September 1984 that it would be helpful to them if they were supplied with a Winchester disk, the CP/M operating system and other software as, e.g. BASIC and FORTRAN to ensure a rapid and effective implementation of the European Central Barley Data Base. These items would provide the possibility of modifying software to perform the day to day tasks of a data base (cf. paragraph 10). This matter was to be discussed with Messrs. Dr. Blixt, H. Knupfer, J. Konopka and F. Yndgaard during the ECP/GR Workshop on Exchange of Information at Radzikow who would provide the ECP/GR Secretariat with documented recommendations.

13. Through the cooperation of the Plant Genetic Resources Centre, Addis Ababa, Ethiopia, passport data of 5,000 barley accessions on magnetic tape were given to Dr. J. T. Williams, Executive Secretary, in Addis Ababa in June 1984. The passport data will be included into the European Central Barley Data Base after tape copying in Washington (cf. Report Barley Working Group Meeting 1983, paragraph 2.9; Report TCC Meeting 1983, paragraph 9; Letter from J. Engels, Project Coordinator PGRC/E, from 31 July 1984).

Future activities

14. Keeping in mind that work with genetic resources is a service to plant breeding, the European Barley Catalogue should be made accessible to plant breeders and research workers as soon as possible. Therefore, the Catalogue should be offered through Country Coordinators at the end of 1985 (cf. paragraph 5). Seed requests could be sent directly to respective gene banks. Seed is available free of charge.

15. The rationalization of collections is a long-term objective. It includes the identification and elimination of unwanted duplicates and the storage of duplicate sets for safetly purposes.

The use of passport data alone can result only in the identification of "ostensible duplicates". Confident identification requires a growing in the field and careful comparisons between supposed duplicates (cf. Dr. K. Symes, Australian Wheat Collection).

16. Barley accessions, e.g. mutant lines, can differ in their requirements for successful multiplication. Appropriate "management descriptors" should be added to respective accessions by the curators.

17. "Principal attribute descriptors" (Dr. S. Blixt) can compensate to some extent for the shortage of evaluation data. They indicate the original reason for the inclusion of the accession (disease resistance, quality factors etc.). Whenever possible this data should be recorded.

18. Recent accessions of the contributing institutions as well as additions and corrections of data should be included into the European Central Barley Data Base in an annual update.

19. When the European Central Barley Data Base is established in 1985 the accessions of further collections (gene bank, breeder collections) are to be included.

20. A Workshop on the rationalization of collections (cf. paragraphs 15 - 19)and on other topics e.g. the registration of characterization and evaluation data, based on the recommendations of the Barley Working Group Meeting 1983 and on "The IBPGR in its second decade", will be held at the ZIGuK before the end of 1985.

Constraints

21. The members of the Barley Working Group may have underestimated the amount of the work and resources required to produce the European Central Barley Data Base and the Catalogue of European Barley Genetic Resources.

22. The diversity of passport data, of their format and of computer systems created difficulties in handling the data (cf. paragraph 9 and 10).

It is hoped that the ECP/GR Workshop on Exchange of Information at Radzikow on 23 - 25 October 1984 (originally scheduled for not later than March 1984, cf. Report on Barley Working Group Meeting 1983, paragraph 2.3) will be helpful to establish a network for computer-readable data exchange.

TABLE 1

BARLEY DATA RECEIVED AT GATERSLEBEN UP TO 15.10.1984

Country	Institute	Form[1/]	No. of Acc.	No. of Descr.
AUT	Linz, BVAL	TL	42	18
		TL	106	11
BEL	Avelgem-Kerkhove	HL	145	3
		HL	147	2
	Gembloux	TL	621	2
	Heverlee	TL	200	6
CSK	Praha-Ruzyne	CP	1973	11
CYP	Nicosia, ARI	CP	26	27
DDR	Gatersleben	MD	9700	26
DEU	Braunschweig, BGRC	CP	7000	10
FRA	Clermont-Ferrand, SAP	CP	1174	9
		CP	621	11
	La Miniere, GEVES	CP,HL	978	5
GBR	Cambridge, PBI	CP	5000	13
	SCRI	CP	3490	13
		CP	3490	8
GRC	Thessaloniki, GGB	CP, CF	32	20
HUN	Tapioszele, ARC	CP	1011	11
ITA	Bari, MG	CP	661	28
NLD	Wageningen, SVP	HL	1900	10
		CP	215	17
		CP	71	21
Pol	Radzikow, IHAR	CP	2500	8
	Bakow	CP	415	3
YUG	Kragujevac	MD	663	9

Remarks:

1/ CF--Collection Forms (Expedition), CP--Computer Printout, HL--Handwritten List, MD--Magnetic Diskettes, MT--Magnetic Tape. TL--Typed List (by typewriter).

APPENDIX IV

REPORT ON PRUNUS WORKING GROUP ACTIVITIES

by

Professor I. Fernqvist, Chairman

The Working Group was convened at a meeting held at the Nordic Gene Bank (NGB) in Lund, Sweden, 24-27 May 1983. A report with a detailed work plan in which the aims of the project and the recommendations aregiven, was published by the IBPGR Secretariat.

1. DESCRIPTOR LISTS

The Documentation of wild forms, landraces, old or modern cultivars should be done according to descriptor lists for almond, apricot, cherry, peach and plum. Responsible for those descriptor lists are: Dr. Hanna Schmidt, Ahrensburg, DEU - Cherry; Dr. D. Cobianchi, Forli, ITA - Plum; Professor E. Bellini, Viterbo, ITA - Peach; Professor R. Guerriero, Pisa, ITA - Apricot and Professor R. Gulcan, Bornova-Izmir, TUR - Almond. These five descriptor lists should be published by Spring 1985 at the latest.

2. RETURN OF COMPLETED QUESTIONNAIRES

The first request to complete Prunus questionnaires was sent by the Secretariat to country coordinators on 5 October 1983 with a suggested return of the questionnaires by January 1984. In February 1984 only eight countries had positively answered this request and therefore a second letter was mailed on 23 February 1984 to those country coordinators who had not replied.

The Working Group designated crop coordinators to handle the data from the Prunus questionnaires. The workers responsible for the descriptor lists have also agreed to act as crop coordinators together with Professor S.W. Zagaya, Skierniewice, POL - Cherry; Professor S. A. Paunovic, Cacac, YUG - Plum; Dr. V. Cociu, Pitesti-Maracineni, ROM - Plum; Ing. S. Kalasek, Zelidice Brvno, CSK - Peach and Dr. Ch. Grasselly, Montfavet, FRA - Almond.

Crop coordinators were requested by the Secretariat to send all the returned questionnaires to the central data base by 15 September 1984 at the latest. This deadline was observed, except for three coordinators of apricot, peach and plum, who will return the questionnaires before 20 December 1984.

A brief summary of completed questionnaires is given below. More details are provided in Table 1.

Almond: Data from fourteen countries including seventeen collections with an approximate total of 600 accessions.

Apricot: Data from eighteen countries including 21 collections with an approximate total of 1,300 accessions.

Peach: Data from eighteen countries including 25 collections with an approximate total of 2,600 accessions (more than half of which come from Italy).

Plum: Data from fifteen countries including 21 collections with an approximate total of 1,400 accessions.

Cherry: Data from nineteen countries including 29 collections with around 2,400 accessions

The cherry data assembled by the two crop coordinators have already been computerized by the Plant Breeding and Acclimatization Institute, Radzikov, Poland.

Some of the questionnaires were partly completed - e.g. instead of source of origin, the origin of the budwood was given or origin was lacking or only names of varieties were mentioned.

Certain collections gave information only on their local material - while others on all their material (breeding material included). Furthermore most countries gave data only from one collection, while it is known that more collections exist in these countries.

When all the basic data have been compiled into Prunus catalogues, preliminary drafts will be circulated. The curators will then be asked first to check the drafts and give additional information when necessary, then to supply full passport data and characterization and evaluation data as available. The Working Group recommends as a general principle that the full data should be provided by the country in which the accession originated or, alternatively, by the country where the cultivar is most widely grown.

3. EMERGENCY COLLECTING

It is hoped that non IPF governments will undertake the urgent collecting missions as recommended by the Working Group as inputs- in-kind to the ECP/GR programme.

A project on collection and characterization of Prunus domestica L. and Prunus insititia L. in Yugoslavia, began in 1983 under the supervision of Professor Paunovic (a member of the Working Group) and is supported by IBPGR.

The Aegean Regional Agricultural Research Institute, (ARARI) Izmir, Turkey, has informed the Secretariat that the collection from wild populations of apricots and almonds is already included in their programme.

4. TRAINING

Mr. Makovitch, from Maize Research Institute, Zemun, Yugoslavia, received documentation training in NGB, specifically for the registration of Prunus data, for a duration of two weeks.

PRUNUS QUESTIONNAIRES

Country	Almond	Apricot	Peach	Plum
Austria	X	X	X	X
Belgium	(1) no	(1) no	(1) no	(1) no
Bulgaria	(1) 20	(1) 113	(1) 108	(1) 110
Cyprus	no	no	no	no
Czechoslovakia	(1) 2	(1) 17	C.C.	(1) 44
Sweden, Denmark, Finland, Norway, Iceland	X	X	X	(2) 315
France	(2) 152	(2)+250	(3) 242	(2) 79
Federal Republic of Germany	X	X	X	X
Democratic Republic of Germany	(1) no	(1) no	no	(1) 77
Greece	1 (17)	(1) 17	(1) 6	X
Hungary	(1) 114	(1) 63	no	(1) 235
Israel	(2) 16	(2) 14	(3) 158	(2) 55
Italy	(1) 95	456 C.C	+ 1650 C.C	C.C
Netherlands	X	(1) 5	(1) 9	X
Poland	X	(1) no	(1) 8	(1) 20
Portugal	X	X	X	X
Spain	(3) 56	(1) 71	(3) 36	X
Switzerland	X	(1) 20	(2) 77	(1) 40
Turkey	(2) 53	(2) 62 C.C	(1) 18	(1) 31
United Kingdom	X	(1) 4	(3) 47	(1) 89
Yugoslavia	(2) 60	(4) 173	(3) 189	(6)+200
Romania	(1) 11	(1) 25	(1) 15	(1) 110

X - means no reply. C.C. - means Crop Coordinator.
( )-means no.of collections which have been returned completed questionnaires.
no -means that the Secretariat was informed that no collection of the respective crop was held.

APPENDIX V

REPORT OF THE FORAGES WORKING GROUP ACTIVITIES

by
Dr. J. H. W. Holden, Chairman

The Meeting of the Forages Working Group was held in the Fodder Crops and Pastures Research Institute, Larissa, Greece, 7-9 February 1984.

I.. REGISTRATION OF BASIC PASSPORT DATA

The Working Group established a list of institutions or gene banks which agreed to accept responsibility for the registration and processing of the preliminary passport data. The Working Group suggested, and the data bases accepted, responsibilities for particular species in which the institutions are known to have an active interest. The possession of adequate computing facilities was another important consideration.

Agreed data bases for forage species:

1. Medicago sativa. M falcata and M. media. Groupe d'Etudes et de Controle des Varietés et des Semences (GEVES), Institut National de Recherches Agronomiques (INRA). La Minière, France.

2. Medicago annual species, Trifolium subterraneum. Instituto Nacional de Investigacao Agronomica (INIA), Badajoz, Spain.

3. Trifolium repens, Lolium perenne, L. multiflorum. Welsh Plant Breeding Station (WPBS) Aberystwyth, Wales, United Kingdom.

4. Dactylis spp. and Festuca spp Plant Breeding and Acclimatization Institute (IHAR) Radzikow, Poland.

5. Bromus spp. Research Centre for Agrobotany (RCA), Institute for Plant Production and Qualification, Tapioszele, Hungary.

6. Phleum spp. Nordic Gene Bank (NGB), Lund, Sweden.

7. Trifolium pratense. Station Federale de Recherches Agronomiques, de Changins, Switzerland.

8. Vicia sativa, other forage Vicia spp., annual Lolium, Phalaris tuberosa. Laboratoria del Germoplasma, CNR, Bari, Italy.

9. Poa spp. Institut für Pflanzenbau und Pflanzenzuchtung der Bundesforschungsanstalt für Landwirtschaft, Braunschweig-Volkenrode, Federal Republic of Germany.

It should be noted that the list above differs in one aspect from that agreed at the meeting. INIA, Zaragoza, Spain, were unable to accept responsibility for the forage Vicias due to lack of resources and CNR, Bari, kindly offered to do the work in addition to annual Lolium and Phalaris tuberosa.

Formal agreement for the first seven data bases listed above was obtained by June 1984.

The Working Group devised a simple questionnaire for obtaining a minimum set of passport data, as a first step in establishing the data bases. Questionnaires were sent out to forage collections, through Country Coordinators, on 21 June 1984. Holders of collections were requested to return data, in magnetic form if possible, by 15 October 1984.

An assessment made on 25 October showed that many countries had not supplied data. Most data bases had received about four replies - WPBS had eight.

For the reason given above, the agreement with CNR, Bari, was not completed until the end of August and data return for Vicias, Phalaris and annual Lolium will be correspondingly delayed.

Likewise agreement from Braunschweig to act as data base for Poa was recently received and questionnaires were circulated in November.

II. TRAINING

A scientist from Fodder Crops and Pastures Research Institute, Larissa, was trained on aspects of forages genetic resources in WPBS from 9 to 20 January 1984.

The Working Group identified training needs and when approached by the Secretariat, the WPBS agreed to organize a training course on the collection, characterization and utilization of forage genetic resources from 15 to 20 October 1984. Twelve trainees from 7 IPF countries were supported by ECP/GR and 2 trainees from 2 non-IPF countries participated also.

Trainees supported by ECP/GR will send a report to the secretariat. WPBS agreed to prepare the lectures given in the course, in the form of a manual which will be published by ECP/GR for distribution to all forage collections.

III. URGENT COLLECTING MISSIONS

The Working Group listed known cases of genetic erosion of forage species requiring urgent collection and the Secretariat had drawn the attention of Country Coordinators to these needs and asked for information on action taken or plans made.

It is known that Poland is organizing a rescue operation to collect endangered landraces of red clover in 1985 or at the latest in 1986. Bulgaria, Greece and Hungary are also including the endangered species in their work programmes.

APPENDIX VI

REPORT ON THE ALLIUM WORKING GROUP ACTIVITES

by

Dr. D. Astley, Chairman

The first meeting of the Technical Consultative Committee for Phase II of ECP/GR reaffirmed the stragegy of organizing crop working groups. The Allium Working Group was convened in May 1984 at the Research Centre for Agrobotany (RCA), Tapioszele, Hungary and the recommendations from this meeting are summarized below:

1. The Working Group agreed to follow the IPBGR designations for global Allium base collection centres including the National Vegetable Research Station (NVRS), U.K. and the Gene Bank Netherlands (GBN) in association with the Institute for Horticultural Plant Breeding (IVT). The Israeli Genebank in collaboration with the Faculty of Agriculture, Hebrew University of Jerusalem has accepted the IPBGR designation to maintain a global field genebank of vegetatively propagated Allium species.

2. The need for additional genebanks within Europe to provide a wider ecogeographical distribution was discussed. The RCA, Tapioszele was recommended as a base collection for A. ampeloprasum and A. cepa from south and east Europe, broadening the available range of photoperiod sensitivity and cold susceptibility, while for vegetatively propagated material the Group recommended that Czechoslovakia or the Federal Republic of Germany be requested to accept responsibility for a field genebank.

3. The IBPGR Vegetable Directory lists the major European collections of Allium with the possible exceptions of those in Poland and Yugoslavia. However many smaller collections exist held by public and private plant breeders which might contain valuable germplasm. In order to produce a preliminary European Catalogue of Allium accessions, and to identify obvious duplicates, the Working Group agreed upon a minimum list of passport data. This list in the form of a questionnaire has been distributed to ECP/GR country coordinators.

4. NVRS and RCA agreed to collate the information received through the questionnaire. RCA will process manually completed questionnaires and data on Apple II diskettes which will be transferred to NVRS to be collated with other computerized data forms.

5. NVRS will identify obvious duplicates and produce a preliminary European Catalogue. This will provide the basis for the rationalization of base and active collections for the maintenance and distribution of material.

6. The European Allium data base will use the IBPGR descriptor list as a standard format. The Working Group recommended a minimum number of descriptors for A. cepa, A. ampeloprasum, A. sativum and A. fistulosum. A substantial number of accessions have already been characterized/evaluated using descriptor lists other than that of IBPGR, e.g. those of COMECON and UPOV. In order to transfer these data to the standard format a computer transfer programme will need to be established. NVRS, RCS and GBN were considered as the most appropriate institutions to collate the full Allium data, with NVRS acting as the central database. The ECP/GR Secretariat has urged the respective Governments in the three countries to provide the necessary support as an input in kind to the ECP/GR.

7. Although the collection of Allium species has been carried out recently in the Netherlands, German Democratic Republic and partly in Greece, Hungary, Czechoslovakia and Poland the Group outlined a plan of action for further collection of cultivated material in a number of countries.

i) Bulgaria - Dr. Batchavarov will continue to collect landraces of A. cepa, A. ampeloprasum and A. sativum;

ii) Hungary - RCA will continue their collection programme for landrace material;

iii) Nordic countries - The Nordic Gene Bank was urged to initiate early action to collect onion and shallot.

iv) EC countries (Belgium, France, Ireland, Italy, Luxembourg, United Kingdom, Federal Republic of Germany) - NVRS has submitted a project for EC funding to collect in these countries. The ECP/GR Secretariat has encouraged the EC authorities to support this project;

v) Remote areas in Poland, Czechoslovakia, Turkey, Yugoslavia and Southern Greece - the ECP/GR Secretariat has contacted the relevant institutions in these countries requesting their collaboration in the collecting programme;

vi) USSR and Rumania - it is thought that landrace material can still be found.

8. The Working Group recognized the importance of the collection of taxa closely related to the cultivated Alliums and commended collecting in Israel and India supported by IBPGR. Only the A. ampeloprasum complex shows any major diversity in Europe and the collection of this material could be combined with collecting missions for wild Brassica species.

9. An important part of the Group's work is to promote specialized training in the genetic conservation of Allium and institutions were identified with specific expertise for training as follows:

NVRS (UK), maintenance of base collection and documentation; IVT (Netherlands), characterization and evaluation of A. ampeloprasum. Faculty of Agriculture, Hebrew University (Israel), all activities relating to wild species. RCA (Hungary), seed storage and processing. Zentralinstitut fur Genetik und Kulturpflanzenforschung (German Democratic Republic), taxonomy.

10. The Working Group was informed of the study on the conservation in vitro of Allium species being carried out by the Faculty of Agriculture, Hebrew University of Jerusalem, Israel with IBPGR support. The potential of different methods will be reviewed and further discussion of this topic was postponed until the study has been published. The Group urges all concerned to assist the Israeli scientists in the collection of relevant information.

11. The recommendations of the Working Group were presented for discussion at the Eucarpia Allium Symposium held in Wageningen, the Netherlands, September 1984. The participants supported the recommendations and looked forward to a coordinated effort within the European framework.

APPENDIX VII

REPORT ON THE SUNFLOWER WORKING GROUP ACTIVITIES

by

Dr. D. Skoric, Chairman

The sunflower is the main oil crop in Europe. There is a large number of researchers, in several European countries, working on the development of new sunflower varieties and hybrids. Unfortunately, a data base on genetic resources and their use in breeding programmes does not exist. To compile the existing knowledge, improve the exchange and conservation of genetic resources, and encourage cooperation among all centres and researchers the European Cooperative Programme for the Conservation and Exchange of Crop Genetic Resources (ECP/GR) has been organized on the basis of crop working groups. Accordingly, a Sunflower Working Group convened on July 20-23, 1984 at the invitation of the Institute of Field and Vegetable Crops, Novi Sad, Yugoslavia.

The major target of the meeting was the preparation of a descriptor list for sunflower. The list, following the standard IBPGR format, had been prepared by the Institute of Field and Vegetable Crops, Novi Sad (Dr. D. Skoric) for consideration by the Working Group. Furthermore a descriptor list from the Research Centre for Agrobotany, Hungary, was submitted for discussion and a third was received from the Sunflower Crop Advisory Committee of the U.S. National Plant Germplasm System (NPGS). In the course of lengthy discussions, the relative usefulness of descriptors and descriptor states was examined and final agreement was reached on a draft list.

It was agreed that the ECP/GR Secretariat should distribute the draft descriptor list for comment to all significant research centres in the world by the end of September 1984, in order to obtain a worldwide consensus on descriptors and this was done. Comments on the draft descriptor list should be sent to the Working Group Chairman by the end of December 1984. The list in its final form should be published by IBPGR before May 1985.

20 basic passport descriptors were selected from the draft descriptor list and it was recommended that these constitute the first set of information to be collated by the data bases.

In the period to May 1985, the Chairman of the Working Group will contact all European research centres interested in cooperative work on the sunflower, including the participants in the FAO European Cooperative Network on Sunflower, and invite them to make use of the descriptor list starting from 1985.

The participants of the meeting in Novi Sad recommended that the Cereal Research Institute (CRI), Szeged, Hungary, should be the European data base for the cultivated sunflower and the Institute of Field and Vegetable Crops, Novi Sad, Yugoslavia, the data base for wild sunflower species.

It was also recommended that all participants should send the available passport data of cultivars and wild species to the respective data bases to allow the data bases to draft preliminary catalogues in form of print-outs. The participants are requested to return their remarks on the preliminary catalogues by the end of August 1985. The Working Group felt that the

assignment of target dates for the registration of full data would be impracticable at this time.

The Working Group recognized the need for training on genetic resources topics (maintenance of germplasm, documentation, characterization, and evaluation, etc.) in nearly every country. Training on an individual basis was felt to be more effective and worthwhile than group training. It was noted that the ECP/GR has resources to support such trainees. The Working Group recommended that a trainee from each of the two data bases, CRI, Hungary and IFVC, Yugoslavia, be sent to a key documentation centre.

It was proposed by the Working Group that an European base collection for sunflower be designated. Participants from Bulgaria and Czechoslovakia offered that this base collection be established at the Institute of Plant Introduction and Genetic Resources "K.Malkov", Sadovo, and the Research Institute of Plant Production, Ruzyne, Czechoslovakia, respectively. It was further agreed that the designation of such a base collection be made after the publication of the preliminary European catalogue.

It was emphasized at the meeting that the modern cultivated sunflower has a narrow genetic base,and that this is important in relation to some important agronomic characters (resistance to diseases, drought, insects, etc.). It is therefore important to start collecting all available landraces of confectionery types from Portugal, Spain and Turkey. A similar genetic variability among landraces is also present in Morocco. Local populations from Australia, China, and Latin America are very variable and a unique source of germplasm. IBPGR should encourage the corresponding research centres in these countries to work intensively on the collecting of local populations in order to increase the genetic variability available to breeders.

Taking into consideration that, on one hand, the narrow genetic variability of the cultivated sunflower becomes a limiting factor in sunflower breeding and, on the other, the existence of a large number of wild species and interspecific hybrids in North and Central America, the question of including wild species material in collections and breeding programmes is very relevant. It is evident that all disease resistance genes that have been incorporated in sunflower varieties and hybrids come from certain wild species.

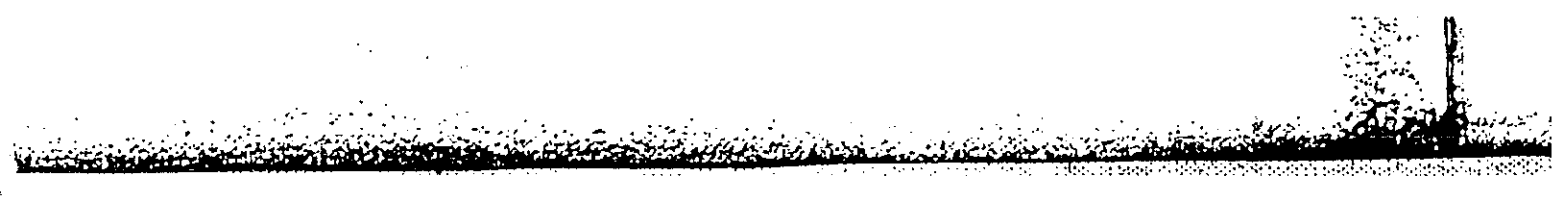
Within the framework of the FAO European Cooperative Programme on Sunflower, participants in the sub-network "Collection, evaluation, and conservation of wild sunflower species and their use in sunflower breeding programmes" have done much for the inclusion and use of wild sunflower species in European breeding programmes. The existing collections of wild species are by no means complete and they do not include the full range of genetic variability available within all of the species. The members of the Working Group decided that it is necessary to organize collecting trips across North America in the near future. Since the U.S. National Plant Germplasm System has already scheduled collecting trips for the next few years, it was felt that European researchers should participate with IBPGR support. A detailed schedule of collecting trips will be prepared by the Chairman of the Working Group and sent to ECP/GR by the end of November 1984.

The Working Group recommended that the IFVC, Yugoslavia, also be designated as a documentation centre for the maintenance of wild species and, as such, to act as a reference centre for distribution of information and collaboration with other institutes/networks throughout the world, e.g. the wild species subsection of the NPGR.

It was recommended that magnetic tape be used whenever possible for the exchange of data. It was also agreed that other computerized forms or those manually prepared will be accepted by data bases, when the use of magnetic tape is not possible. Failing this, data in other forms, as computer printout or as manually prepared records, will be acceptable.

In the period between the meeting and the writing of this report, members of CRI, Hungary, and IFVC, Yugoslavia, took part in the IBPGR: ECP/GR Workshop on Exchange of Information held in Radzikow, Poland, on October 23-25, 1984.

In conclusion it may be said that the period from the meeting of the Working Group until the present is too short for evaluation of progress to be made. Still, let us all be aware that the next period will be the period of intensive work on improving the cooperation on sunflower genetic resources among European countries.



APPENDIX VIII

REPORT OF THE WORKSHOP ON EXCHANGE OF INFORMATION

Channels for communication

1. A review of computer facilities available to cooperating programmes in each country was provided by the members of the Workshop. This information is summarized in tables provided in Appendix III. Appendix III shows that two categories of computers used in the European genebanks can be distinguished. The first category comprises mainframes and minicomputers which are either equipped with or have access to magnetic tape decks. The second category consists of microcomputers of different makes (for which floppy discs are the only storage available).

2. The majority of stand-alone microcomputers are Apple II's. It was noted that the only centre to have an Apple II linked up to a minicomputer with magnetic tape facilities was IHAR. Accordingly, the Workshop recommended that IHAR be nominated to act as a File Transfer Centre* between Apple II and computers with magnetic tapes. For institutes having NGB IRS-83 microcomputers it was recommended that the Nordic Genebank be nominated as a File Transfer Centre.

3. The Workshop noted some hardware incompatibility of the magnetic tape facilities. It was recommended therefore that whenever possible tapes should be copied to the standard required by the receiver by the sender. In circumstances when this is not possible a centre in another country should be approached to undertake the work.

Transfer medium

4. The consideration of computer facilities available in the European genebanks shows that except for exchanges of soft discs between compatible microcomputer systems, magnetic tape would be the most suitable transfer medium. Mr. Serwinski presented a paper entitled "Format for magnetic tape recording in use for exchange of genetic resources information". This paper was modified following discussion and is reproduced as Appendix IV.

5. The format presented therein was accepted and recommended as a standard for exchange of information between dissimilar computer systems. Of the two alternative formats accepted, fixed format would be preferred. The participants agreed to develop, in their genebanks, the proper software for the transferring of the data files into/from the accepted standard.

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* File Transfer Centre is defined as a centre which will copy the data files from one communication medium to another, e.g. from discs to magnetic tapes.

Identification of descriptors

6. The establishment of central data bases for the ECP/GR requires standardized descriptors which are clearly defined. The Workshop examined the basic passport descriptors which appear to be common for all the Working Groups of ECP/GR. It was agreed that these descriptors were not suitably defined for full compatibility. An attempt was made to define these descriptors and their descriptor states (Appendix V). It was felt that a maximum field length for every descriptor should be a part of the definition. The Workshop recommended that these revised definitions be followed by the European Genebanks and institutions for the transfer of data to the central data bases. It was further recommended that all other descriptors be defined in the same rigorous manner.

7. It was felt necessary to add a new descriptor, "GENEBANK DESIGNATION" in the central data base to identify information about accessions coming from different genebanks; the maximum length for this descriptor to be 10 characters. The states for the descriptor consist of the three letter country code used by IBPGR/FAO followed by the acronym/abbreviation of the particular institute/genebank. In the case of regional genebanks, the prefix REG should be used instead of country code. A list of genebank designations was compiled during the Workshop (Appendix VI).

8. After a lengthy discussion the Secretariat was requested to collate the recognized acronyms or abbreviations used by existing collections in each country by requesting these from the Country Coordinators. The list should be circulated to all concerned genebanks as soon as possible.

9. It was agreed that the acronym/abbreviation of the genebank (see para 7) should also be used as descriptor state for the descriptors 'donor' and 'collector' when applicable.

10. It was recommended that the institutes establishing crop data bases take the responsibility to select the most suitable taxonomic classification for use in the European Crop Lists*. The central data bases will need to provide a list of synonyms appearing in incoming data.

European Crop Lists and identification of possible duplicates

11. The identification of duplicates was discussed and it was agreed that the mechanisms for the identification of putative duplicates is the responsibility of each central data base. Further procedures for the certain identification of duplicates should be the responsibility of the Working Groups.

Costs

14. Some countries expressed concern about the possible costs of initiating and maintaining a central database. It was recognized that Governments have accepted this task as input in kind, of relevant institutes to the ECP/GR programme. The workshop recommended that the Technical Consultative Committee reaffirm the government commitments to inputs in kind to the ECP/GR.

* It was agreed that the denomination "European Crop List" was more appropriate than "preliminary catalogue" previously used.

12. The Workshop agreed that for each European Crop List the same number should be used for all the putative duplicates of the same accession. The Workshop considered the best ways to check the draft lists. Unless otherwise requested, it was agreed that the central data bases should send back to the original genebanks a printout with transformed data. The data should be arranged in the same order as supplied. In addition, a list of accessions held in other genebanks, but originating from the relevant country, should also be sent.

Mailing of magnetic media

13. The Workshop recognized that there were sometimes delays in magnetic media crossing national boundaries. The Workshop asked for particular attention to be paid to this to obviate any unnecessary difficulties. For instance, a custom declaration could be sent in the language of the receiving country. In addition, magnetic media should be sensibly packed for postage.

Registration of characterization/evaluation data

15. The Working Groups may recommend the registration of additional descriptors in the databases once passport data have been registered. It is recommended that the Secretariat uses suitable advisers to review the descriptors established by the Working Groups and provide exact definitions as done for basic passport descriptors by this Workshop.

APPENDIX IX

COLLECTING OLD FRUIT TREE CULTIVARS IN FARMS AND GARDENS WITH THE AID OF THE PUBLIC

THE EXPERIENCE IN BELGIUM

by

Dr. C. Populer

1. INTRODUCTION

During the last ten years, a collection of old cultivars of fruit trees has been established at the Plant Pathology Station, Ministry of Agriculture, in Gembloux, with the view of screening out material with resistance to disease. The numbers of accessions which are presently in the collection are 880 for apples, 800 for pears and 220 for plums.

In a first phase from 1975 to 1978, the collected material was mainly obtained from old collections in horticultural schools. A few cultivars were also received from private owners who had heard by chance about our programme. From 1979 on, collecting was carried out systematically in old standard-tree orchards and in gardens, and this second phase is not closed yet. The present report gives a more detailed account of how the contact was established and maintained with the public.

2. WORKING WITH THE PUBLIC

Table 1 lists for each year since 1975 the number of persons who reported they had some special fruit tree cultivar(s) against the number of accounts of our programme in the press or on the radio and TV and also against the number of conferences we gave on the subject or visits of groups we allowed in our experimental orchards. The years in the table are counted from 1 August to 31 July the following year. The reason for this is that we do the collecting work each year in August and early September which is the proper period for taking budwood and observing simultaneously the fruit and foliage. The offers from the public coming in until the end of July can consequently be taken into account for the following collecting period.

Role of the printed press - The correlation between the number of persons reporting to us on old fruit tree cultivars and the number of articles in the press for the same year is apparent in table 1. Many of our correspondents refer explicitly to an article in a newspaper or another periodical and offers tend to arrive in a cluster after an article is published. Out of the total 66 known articles in the press, the two published in 1978-79 were short

Years	Persons reporting old cvs	Papers in the press	Radio and TV broadcasts	Conferences and visits
75	8			
75-76	8			
76-77	16			
77-78	13	2	-	
78-79	68	2	-	2
79-80	211	16	1	4
80-81	145	9	2	5
81-82	74	5	-	4
82-83	336	23	2	6
83-84	64	4	3	5
84-85*	59	5	3	8
Total:	1002	66	11	34

Table 1. - Flow of information from and to the public on the conservation of old fruit tree cultivars. (*) 1984-85 : August to November only.

"wanted-ads" written by us, five in 1979-80 resulted from an information session/press conference organized by the Agricultural Research Centre concurrently with the publication of a popularized account of our programme, and nineteen in 1982-83 were reports of another press conference organized by the Regional Ministry of Water, Environment and Rural Life on the occasion of a contract with the Plant Pathology Station to develop new activities in the area. The other forty papers were unsolicited. Four papers were submitted to us at the draft stage to check their scientific content and five journalists requested an interview. The other papers, though prepared without any contact with the Station, were scientifically correct and obviously documented from our popularized note. We were informed of their existence by the incoming mail and calls from the public. The return in terms of number of persons offering old cultivars varied with the readership of each periodical. The best yield came from an independent farmers' weekly, the lowest from daily newspapers with a predominantly industrial urban public. Regional dailies were also very effective but environmentalists and naturalists periodicals only moderately so.

Radio and television broadcasts. - All these broadcasts were produced with our participation. In all cases excepting one, the initiative came from the media people. The exception was a two-minute TV news sequence connected with the second press conference. In TV, the broadcasts were all presentations of our programme and ranged in length from a few minutes to half an hour. The radio broadcasts varied also from a few minutes to two or three one-hour sequences of discussion alternating with music, at weekly intervals.
The subjects were variously connected with fruit trees, either dealing with conservation or with local fruit-growing traditions, or giving planting advice. Except in one instance, where the listeners were explicitly invited to phone or send in their information, the return of these broadcasts is difficult to estimate. Correspondents may refer to a broadcast but often in addition to an article in the press. The impression is that the broadcasts were often more effective in creating an awareness of the subject than in

eliciting an immediate response. An advantage of the printed press is that the prospective correspondent need not take the trouble to note down an address and that he can keep a clipping as a reminder.

Talks and visits. - Table 1 lists only talks and visits to Belgian groups. Excepting the information session in 1979 and two "open-door" visits in 1984, all the conferences and visits were requested by the groups themselves. These included associations of farmers, horticulturists, amateur gardeners or environmentalists, final year classes of horticultural schools and scientific or educational organizations. Group sizes ranged from a dozen to three hundred persons. Contact with a group sometimes prompted one or several offers but the overall direct return from this type of activity was low. Conferences and visits are primarily a consequence rather than a cause of information in the public, but they help to spread a better perception of our work and of genetic conservation. In this regard, they are probably most useful with school audiences.

Technical note 3/20. - This is the popularized account of our programme referred above. Since the end of 1979, 2800 copies have been distributed, mainly on request. Most of the press articles on our programme cite the reference of this account. It has probably been useful in the correct transfer of information to the press and the public, since we meet little misconceptions about our programme.

Verbal spread of information - Correspondents often report they learned about our programme by word of mouth. Sometimes also they have been shown the technical note by a friend. This type of communication multiplies the effect of the other information channels.

III. CONCLUSION

In our experience, each periodical and radio or television programme reached a specific public. The effective mobilization of owners of old fruit-tree cultivars resulted from the multiple information channels.

As described above, communication with the public was set rolling more by chance circumstances than by deliberate efforts on our part. The help of the information specialists was in a large measure offered to us. Their concern to support our work has been constant. Also, the subject of old fruit-tree cultivars exercises an attraction on many people and the interest for genetic conservation was already largely present or latent in the public. On the other hand, the fact that our collection already held 800 accessions by the end of 1978 when the first systematic contacts with the public started, presumably helped in developing communication as it made our interest for collecting material more credible. Working with the public has presently raised our collection to 1900 accessions although only one third of our correspondents have yet been visited.

Concomitantly with the offers from the public, we received about an equal number of requests for information on our research programme or on problems in fruit growing. Answering these requests is a time-consuming occupation which may be regarded as the price paid for help in collecting genetic material. In fact, these requests come mostly from people interested in the results of our evaluation work and wishing to plant a wider choice of less disease-susceptible fruit tree cultivars, and they must be looked on as another expression of support by the public.

ANNEX VIII

TIMETABLE