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PROGRESS REPORT ON THE WORK OF THE TECHNICAL COMMITTEE, THE
TECHNICAL WORKING PARTIES AND THE WORKING GROUP ON BIOCHEMICAL
AND MOLECULAR TECHNIQUES, AND DNA-PROFILING IN PARTICULAR

Document prepared by the Office of the Union

1. This document presents a progress report on the work of the Technical Committee (TC) and its Technical Working Parties (TWPs), including the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT).

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I. PROGRESS REPORT OF THE WORK OF THE TECHNICAL COMMITTEE

2. The TC held its thirty-ninth session in Geneva, from April 7 to 9, 2003, under the Chairmanship of Mr. Michael Camlin (United Kingdom). The Report on the Conclusions is contained in document TC/39/15 and the detailed Report appears in document TC/39/16 Prov.

Participation

3. The session was attended by 89 participants from 39 members of the Union, one observer State and five observer organizations.

Report on Relevant Matters Discussed in the Administrative and Legal Committee, the Consultative Committee and the Council (Oral Report by the Vice Secretary-General)

4. The Vice Secretary-General provided an oral report on the forty-fifth and forty-sixth sessions of the Administrative and Legal Committee (CAJ), the sixty-second and sixty-third sessions of the Consultative Committee and the nineteenth extraordinary session and the thirty-sixth ordinary session of the Council.

Progress Reports on the Work of the Technical Working Parties, Including the Working Group on Biochemical and Molecular Techniques, and DNA Profiling in Particular (BMT), and the Ad hoc Crop Subgroup on Molecular Techniques (Crop Subgroups)

5. The TC received oral reports, from the Chairpersons, on the work of the Technical Working Party for Agricultural Crops (TWA), the Technical Working Party on Automation and Computer Programs (TWC), the Technical Working Party for Fruit Crops (TWF), the Technical Working Party for Ornamental Plants and Forest Trees (TWO), the Technical Working Party for Vegetables (TWV) and the Mushroom, Soybean and Sugarcane Crop Subgroups. It noted that the BMT had not met since the thirty-eighth session of the TC.

Membership of the Enlarged Editorial Committee

6. The Chairman of the TC reported that Canada and the United States of America had nominated Mr. Doug Waterhouse as an additional member of the Enlarged Editorial Committee (TC-EDC). It was agreed that, on the basis of his expertise and experience within a breeder-based testing system, Mr. Doug Waterhouse would become a member of the TC-EDC, for a period of three years to coincide with the terms of the Chairmen of the Technical Working Parties (TWPs), in accordance with the proposal agreed by the TC at its thirty-eighth session.

GAIA Software

7. The TC received a report, from the Delegation of France, on progress in the development of the GAIA software which had been designed to compute a phenotypic distance between two varieties being a sum of distances for individual characteristics. The Delegation of France reported that the GAIA software should be ready for distribution to

members of the Union, in the form of a CD-ROM, by the end of April 2003. The CD-ROM would be distributed with a user guide and information on its application. The experts from France would also provide some initial guidance on its application. The Office of the Union (the Office) added that it would provide information on how to obtain the software on the restricted area of its Website. It was noted that the GAIAs software and its application would be discussed at the twenty-first session of the TWC, to be held in Tjele, Denmark, from June 10 to 13, 2003.

Molecular Techniques

8. The TC considered document TC/39/3.

Document on the Possible Use of Molecular Markers in the DUS Examination

9. The TC discussed the proposal from the TWF for the preparation of a document on the possible use of molecular markers in the DUS examination. It was agreed that the Office, in conjunction with the Chairmen of the TC and the BMT, would use existing documents and, in particular document TC/38/14 Add. –CAJ/45/5 Add., to develop a summary of the current position, which would be considered by the TC at its fortieth session in Spring 2004. The TC would then consider whether it would be appropriate to invite the CAJ to examine the document. In the meantime, it agreed that the TWPs should be given a further opportunity to discuss document TC/38/14 Add. –CAJ/45/5 Add. in more depth at their sessions in 2003.

Ad hoc Crop Subgroup on Molecular Techniques (Crop Subgroups)

10. The TC approved the following Crop Subgroups Chairpersons:

Mr. Nicovan Marrewijk (Netherlands):	Mushroom;
Mrs. Beate R ücker (Germany):	Potato;
Mr. Marcelo Labarta (Argentina):	Soybean;
Mr. Luis Salaices (Spain):	Sugarcane.

11. The TC noted the work of the Crop Subgroups in 2002 and agreed the following programs of work in 2003, subject to meetings only being held where there were sufficient papers for consideration:

Maize:	no future meeting to be planned at this stage, subject to consideration by the TWA;
Mushroom:	no future meeting to be planned at this stage, subject to consideration by the TWV;
Oilseed Rape, Potato and Wheat:	to meet consecutively, at the same venue, in May or June 2003;
Rose:	a suitable date for a meeting to be arranged when papers are available;

Sugarcane:	to hold another meeting in association with the thirty -second session of the TWA to be held in Tsukuba, Japan, from September 8 to 12, 2003;
Soybean:	to hold another meeting in association with the thirty -second session of the TWA to be held in Tsukuba, Japan, from September 8 to 12, 2003;
Tomato:	no future meeting to be planned at this stage , subject to consideration by the TWV .

12. With regard to the report from the Mushroom Crop Subgroup, the TC recommended that the matters raised by that Crop Subgroup should be addressed by the TWV when it considered that the report at its thirty -seventh session in June 2003.

13. With regard to the proposal from the Sugarcane Crop Subgroup for the production of an updated explanation and analysis of available molecular methods, summarizing their advantages and disadvantages, the TC emphasized that this should have referred to their use in variety characterization and not DUS testing. The Chairman of the TC confirmed that this proposal and that of the Sugarcane Crop Subgroup, to prepare a draft standard protocol to obtain and store molecular data relevant to the species, could be considered under the relevant agenda items of the eighth session of the BMT, to be held in Tsukuba, Japan, from September 3 to 5, 2003.

Preparatory Workshops

14. The TC considered document TC/39/8.

15. It was noted that the preparatory workshops which took place in 2002 had proved useful and it was agreed that preparatory workshops should be organized in conjunction with the TWP meetings to be held in 2003. In order to further improve the value of the workshops, it was recommended that the Office issue a questionnaire, to potential participants, seeking information on items which would be of particular interest.

TGP Documents

16. The TC considered documents TC/39/ 5, TGP/7 Draft 2 and TC/39/6.

TGP/7 "Development of Test Guidelines"

17. The TC decided that certain sections of TGP/7 Draft 2 "Development of Test Guidelines" should be considered as matters which required further discussion before agreement could be reached. It agreed that these sections should be highlighted in the next draft of TGP/7, to be considered by the TWPs during their sessions in 2003, to ensure it was understood that this text had not been agreed by the TC. In addition, the TC did not examine Section 4, GN18 to GN30 in Annex 3 and Annex 4 of the document, and agreed that the highlighted text in these sections should remain highlighted in the future drafts of the document. With these exceptions and revisions of the text agreed at its session, the TC agreed

that that document should be used as the basis for the development of Test Guidelines in 2003.

Program for the Development of TGP Documents

18. With regard to the program for the development of TGP documents set out in document TC/39/6, the TC received an oral report from the Chairman of the TC on the views of the TC-EDC, which had been developed during its meeting on the previous day, and which are reflected in the approach developed in the following paragraphs.

19. The TC confirmed that TGP/7 "Development of Test Guidelines" should continue to receive highest priority and that all TWPs should be invited to consider TGP/7 at their sessions in 2003. It also confirmed that TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity" should continue to receive the next highest priority. However, it considered that TGP/7 would take a substantial amount of time to be discussed and agreed that the TWPs should not be requested to consider TGP/4, TGP/9 or TGP/10 at their sessions in 2003. Nevertheless, it agreed that the flow diagram, in Annex I of document TC/39/6, showing the proposed restructuring of TGP/3, TGP/4 and TGP/9, should be elaborated and presented to the TWPs at their sessions in 2003. Furthermore, it agreed that TGP/3 should not be discussed further in the TC and should be a matter for the CAJ.

20. It agreed that, during 2003, the Office should produce full drafts of TGP/4 and TGP/9, based on the existing information in the individual sections and the restructuring set out in Annex I of document TC/39/6, to ease the consideration of these documents by the TWPs at their sessions in 2004. With regard to other TGP documents, the TC agreed that the TWPs should continue to discuss drafts of those documents for which they were responsible as far as time allowed.

21. The TC agreed with the proposal in document TC/39/6 that drafts of TGP/5 "Experience and Cooperation in DUST Testing," TGP/6 "Arrangements for DUST Testing" and TGP/12.2.1 "Chemical Constituents: Protein Electrophoresis" could be submitted to the TC, at its session in spring 2005, without discussion in the TWPs.

22. It was agreed that the Office should provide an updated program for the development of TGP documents in accordance with this approach and that this program should be circulated to the TC and TWPs.

Publication of Variety Descriptions

23. Discussions were based on document TC/39/9 and the oral report from the Technical Director on the views of the *Ad hoc* Working Group on the Publication of Variety Descriptions (WG -PVD).

24. On the basis of the proposals from the TWPs, and the proposal made by the WG -PVD for a study on rose, the TC agreed that the model study for the project on the publication of variety descriptions should be based on the species identified below, with the coordinators and interested parties as shown:

<u>Species/Crop</u>	<u>Proposing TWP</u>	<u>Coordinator</u>	<u>Interested Parties</u>
Apple	TWF	GB	AR, BE, CA, CZ, DE, FR, GB, HU, LV, NL, NZ, CPVO
Barley	TWA	DK	AT, AR, CA, CL, CZ, DE, DK, EE, ES, FI, FR, GB, HR, HU, NL, NZ, RO, RU, SE, ZA
Chinese Cabbage	TWV	JP	CN, DE, NL, JP, KR, PL, CPVO, ISF
Lettuce	TWV	NL	CZ, DE, FR, HU, NL, PL, ES, CPVO, ISF
Petunia	TWO	DE	AU, CA, DE, JP, NZ, KR, CPVO
Potato	TWA	NL/CPVO	AT, CA, CL, CZ, DE, EE, GB, IL, NL, NZ, ZA, CPVO
Rose			CA, KE, NL, CPVO
Strawberry	TWF	IL	AR, CA, DE, ES, FR, HU, IL, KE, NZ, CPVO

25. The table above includes interested parties which notified the Office, after the session of the TC, that they wished to be included in the study for any of the species.

26. On the basis of the lists of soybean varieties in different countries, and lack of varieties in common between different countries, it concluded that it would not be appropriate to conduct a model study involving this species.

27. With regard to a possible study on rose, it was agreed that considerations should be given to including only one type of rose in any study and that the matters should be discussed further by the TWO.

28. In the case of barley, it agreed that the model study should build on the information already obtained by a previous project reported to the TWA in document TWA/29/19.

29. As a first step in the model study, the TC agreed that the coordinators, in conjunction with the Office, should obtain lists of varieties and identify those varieties which appeared in the lists of more than one country. The coordinator should then seek descriptions on a manageable number of varieties for comparison. The descriptions should be according to the characteristics in the latest version of the UPOV Test Guidelines and the location at which the descriptions were reproduced should be clearly identified.

30. It was recommended that the TWC should be invited to review the work conducted previously by the expert from Denmark, as reported in document TWA/29/19, and give its advice on the management of the data. Furthermore, it was agreed that the delegate from Denmark, in conjunction with the Office, should develop some initial guidance for the coordinators to help in their planning and conduct of the study.

31. The TC agreed that the Chairman of the TWC should be invited to participate in the WG-PVD.

UPOV Information Databases

32. The TC considered document TC/39/13 and agreed the approach for the development and the work program for the development and introduction of the proposed UPOV code set out in that document and the proposal for the development of the “GENIE” database.

Review of the UPOV -ROM Plant Variety Database

33. The TC considered document TC/39/14 –CAJ/47/5 and noted the results of the questionnaire and proposed program of activity for improving the effectiveness of the UPOV-ROM. It clarified that any proposals to change the fields in the UPOV -ROM to be considered as mandatory would need to be agreed by the members of the Union.

Test Guidelines

34. The TC considered and adopted the following Test Guidelines on the basis of the amendments and the linguistic changes recommended by the Editorial Committee:

<i>Document</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>	<i>Latin</i>
TG/9/5(proj.1)	Runner Bean	Haricot d’Espagne	Prunkbohne	Judía escarolata	Phaseolus coccineus L.
TG/13/8(proj.3)	Lettuce	Laitue	Salat	Lechuga	Lactuca sativa L.
TG/38/7(proj.3)	White Clover	Trèfle blanc	Weißklee	Trébol blanco	Trifolium repens L.
TG/43/7(proj.2)	Raspberry	Framboisier	Himbeere	Frambueso	Rubus idaeus L.
TG/100/4(proj.2)	Quince	Cognassier	Quitte	Membrillero	Cydonia Mill. sensu stricto
TG/105/4(proj.1)	Chinese Cabbage	Chouchinois	Chinakohl	Repollo chino	Brassica pekinensis L.
TG/118/4(proj.1)	Endive	Chicorée (frisée, scarole)	Endivie	Escarola	Cichorium endivia L.
TG/192/1(proj.2)	Apple (ornamental varieties)	Pommier (variétés ornementales)	Apfel (Ziersorten)	Manzano (variedades ornamentales)	Malus Mill.
TG/198/1(proj.1)	Chives, Asatsuki	Ciboulette, Civette	Schnittlauch	Cebollino	Allium schoenoprasum L.
TG/199/1(proj.1)	Chinese Chives			Civechino	Allium tuberosum Rottler ex Spreng
TG/BASIL(proj.1)	Basil	Basilic	Basilikum	Albahaca	Ocimum basilicum L.
TG/BRACTE(proj.2)	Bracteantha, Everlasting Daisy	Immortelle à bractées	Gartenstrohblume	Siempre viva, Perpetua	Helichrysum bracteatum (Vent.) Andr.
TG/BROADBEAN (proj.1)(TG/8/4Rev.)	Broad Bean	Fève	Dicke Bohne (Puffbohne)	Habadehuerta, Habadeverde	Vicia faba L. var. major Harz

<i>Document</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>	<i>Latin</i>
TG/CALIBR(proj.2)	Calibrachoa	Calibrachoa	Calibrachoa	Calibrachoa	Calibrachoa Llave & Lex.
TG/CHERIM(proj.2)	Cherimoya	Chérimolier	Cherimoya	Cherimoya, Chirimoyo	Annona cherimola Mill.
TG/DENDRO(proj.2)	Dendrobium	Dendrobium	Dendrobium, Baumwucherer	Dendrobium	Dendrobium Nees
TG/LENTIL(proj.1)	Lentil	Lentille	Linse	Lenteja	Lens culinaris Medik.
TG/LEPTOS	Leptospermum, Tea Tree	Leptosperme	Südseemyrte	Leptospermum	Leptospermum J.R. et G. Forst.
TG/PETUNI(proj.2)	Petunia	Pétunia	Petunie	Petunia	Petunia Juss.
TG/PHALAE(proj.2)	Phalaenopsis	Phalaenopsis	Phalaenopsis	Phalaenopsis	Phalaenopsis Blume
TG/WILLOW(proj.2) TG/72/4(Rev.)	Willow	Saule	Weide	Sauce	Salix L.
TG/MANDA(proj.3) (TG/83/3Rev.)	Mandarins	Mandariniers	Mandarinen	Mandarinos	Citrus; Grp1
TG/ORANG(proj.3) (TG/83/3Rev.)	Oranges	Orangers	Orangen	Naranjos	Citrus; Grp2
TG/LEM-LIM(proj.3) (TG/83/3Rev.)	Lemons and Limes	Citronniers et Limettiers	Zitronen und Limetten	Limones y Limas	Citrus; Grp3
TG/GRA-PUM(proj.3) (TG/83/3Rev.)	Grapefruit and Pummelo	Pomelo et Pam - plemoussier	Grapefruit und Pampelmuse	Pomelo y Pummelo	Citrus; Grp4
TG/PONCI(proj.3) (TG/83/3Rev.)	Trifoliate Orange	Oranger trifolié	Dreiblättrige Orange	Naranjo trifoliado	Poncirus Raf.; Grp5

35. The TC agreed that the Test Guidelines for Persimmon (TG/92/4(proj.2)) should be referred back to the TWF for clarification of the astringency classification of varieties.

36. The TC agreed the plans for the development of new Test Guidelines and the revision of existing ones by the TWPs as shown in Annex II of document TC/39/2. It agreed that, on the basis that the expert from Brazil would be attending the TWA, the Test Guidelines for Coffee should be developed by that TWP, but that the TWF should also be involved in the development of the Test Guidelines. It invited the TWA to consider the development of Test Guidelines for *Panicum miliaceum* L., based on the national guidelines developed by Ukraine.

Award of UPOV Medals

37. The Vice Secretary -General awarded Mr. Wieslaw Pilarczyk with a bronze UPOV medal, in recognition of his chairmanship of the TWC for the period 2000 to 2002.

II. PROGRESS REPORT OF THE WORK OF THE TECHNICAL WORKING PARTIES AND THE WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES, AND DNA-PROFILING IN PARTICULAR

Technical Working Party for Agriculture (TWA)

38. The TWA held its thirty-first session in Rio de Janeiro, Brazil, from September 23 to 27, 2002, under the Chairmanship of Mrs. Françoise Blouet (France). The Report on the Conclusions is contained in document TWA/31/14 and the detailed Report appears in document TWA/31/15.

Participation

39. The session was attended by 40 participants from 23 members of the Union and one observer organization.

Ad hoc Crop Subgroup on Molecular Techniques

40. The TWA noted the proposals, developed by the TC, regarding the program for the existing Maize, Oilseed Rape and Wheat Crop Subgroups and for the establishment of new crop subgroups for potato, sugarcane and soybean. The TWA noted that the Sugarcane and Soybean Crop Subgroups would meet immediately after the TWA session and proposed that the Oilseed Rape, Potato and Wheat Crop Subgroups should meet consecutively, at the same venue, in May or June 2003. The TWA supported the proposed chairpersons of the new crop subgroups agreed between the Chairman of the TC and the Chairperson of the TWA as follows:

Potato	Mrs. Beate Rücker (Germany);
Sugarcane	Mr. Luis Salices (Spain);
Soybean	Mr. Marcelo Labarta (Argentina).

Development of TGP Documents

41. The TWA discussed a number of draft TGP documents with priority being given to TGP/7 "Development of Test Guidelines," TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity." With regard to other TGP documents the TWA discussed TGP/3.2 Draft 1 "Developments and Explanations Regarding Varieties of Common Knowledge" and TGP/6.1.2 Draft 1 "Examples of Arrangements for DUS Testing."

Project to Consider the Publication of Variety Descriptions

42. The TWA discussed environmental effects on plant variety descriptions, based on documents prepared by experts from Germany and the United Kingdom, and the Project to Consider the Publication of Variety Descriptions. It agreed that the TC and the CAJ should be informed about the difficulties in harmonizing variety descriptions due to environmental effects, which, together with the effect of the examiner, may result in different descriptions for the same variety. Therefore, the TWA considered that the project could only proceed on the basis that different descriptions for the same variety could be accommodated. The TWA proposed that Barley, Potato and Soybean be included in the project and the coordinators for these species should be Denmark for Barley, France for Soybean and the Netherlands and

CPVO jointly for Potato. It also agreed that it would be useful for a list of varieties to be provided by each contributing country in order to assess the degree of overlap. The Office was requested to issue a questionnaire seeking this information, the results of which could then be presented to the *Adhoc* Working Group on the Publication of Variety Descriptions and the TC, to help in its decision on how to proceed.

Project for Exchanging Seed of Selected Varieties

43. The TWA considered a project, proposed by an expert from Sweden, for exchanging seed of selected varieties. It was agreed that this project should be aimed at improving the development of suitable grouping and asterisked characteristics in the Test Guidelines and, as such, should become a part of the process of revising or developing Test Guidelines, as described in document TGP/7 "Development of Test Guidelines." It should also seek to identify the extent to which the example varieties would be appropriate within, or beyond, a region. The TWA agreed that the project should continue on Lupins, Rice and White Clover and that a report on progress should be made at the next TWA session.

Preparatory Workshop

44. The TWA received a report on the preparatory workshop held during the morning of September 22, 2002, prior to the TWA meeting, noting that this was attended by 16 participants from 8 members of the Union and one international organization. It heard that the participants considered the workshop very useful and that it had been suggested that relevant documents might be sent to the participants in advance.

Draft Test Guidelines to be Submitted to the Technical Committee

45. The TWA finalized the Test Guidelines for White Clover for submission to the TC.

Draft Test Guidelines to be Discussed at the TWA in 2003

46. The TWA had agreed that the Test Guidelines for Lupins could be submitted to the TC for adoption at its thirty-ninth session in April 2003 subject to agreement by the interested experts on certain characteristics. However, the experts later agreed to discuss the document again at the TWA in 2003. The TWA planned to continue discussion on Test Guidelines for Coffee, Grain Amaranth, Lotus, Medicago (excl. Sativa), Potato and Rice, and decided to begin work on Test Guidelines for Lucerne (Revision), Ryegrass (Revision) and Sesame.

Date and Place of Next Session

47. At the invitation of the expert from Japan, the TWA agreed to hold its thirty-second session in Tsukuba, Japan, from September 8 to 12, 2003. The TWA also noted that it had received offers to host future meetings from: Poland (2004); South Africa (2005); New Zealand (2005 or 2006) and, at the meeting, received an offer from the expert from Hungary to host the TWA in 2007.

Program for the Next Session

48. The TWA proposed to discuss the following items at its next session: Short reports on developments in plant variety protection from members and observers; Report on developments within UPOV; Report on the eighth session of the BMT and Reports from the

Crop Subgroups; Publication of Variety Descriptions; Project for exchanging seed of selected varieties between interested countries; TGP Documents; Discussions on draft Test Guidelines; Recommendations on draft Test Guidelines; Date and place of next session; Future program.

Technical Working Party on Automation and Computer Programs (TWC)

49. The TWC held its twentieth session in Texcoco, Mexico, from June 17 to 20, 2002, under the Chairmanship of Mr. Wieslaw Pilarczyk (Poland). The Report on the Conclusions is contained in document TWC/20/6 and the detailed Report appears in document TWC/20/7.

Participation

50. This session was attended by 24 participants from 12 members of the Union.

Development of TGP Documents

51. The TWC discussed a number of draft TGP documents with priority being given to TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity." With regard to other TGP documents the TWC discussed and made comments on drafts of TGP/8.1 "Use of Statistical Procedures in DUS Testing: Introduction"; TGP/8.2 "Validation of Data Assumptions"; TGP/8.3 "Experimental Design Practice"; TGP/8.4 "Types of Characteristics and their Scale Levels"; TGP/8.5 "Statistical Method for DUS Examination" and TGP/8.6 "Examining DUS in Bulk Samples." In addition, the TWC discussed and made comments on TGP/14.3 "Glossary of Statistical Terms."

Project to Consider the Publication of Variety Descriptions

52. With regard to the report on the Working Group on the Publication on Variety Descriptions, the TWC proposed that an expert from the TWC should be involved in the work of this group and agreed that this should be taken forward with the Chairman of the TWC.

Workshop on Data Handling

53. Mr. Kristian Kristensen (Denmark), coordinator of the Workshop on Data Handling which took place from June 12 to 14, 2002, in Texcoco, Mexico, made a brief report on that activity. He noted that 27 participants from seven different countries and one participant from an observer organization had attended the Workshop. The main objective had been to introduce the main statistical principles used in DUS testing and to provide guidance on the use of the COY program.

Other Items

54. The TWC also discussed: statistical methods for data produced by biochemical and molecular methods; information obtained from a survey on probability levels for uniformity standards for COYU, where it was agreed that further information was necessary to be able to propose a recommendation; a preliminary report on the efficiency of incomplete block designs in herbage DUS trials; and a report on the FlorenceTM image database.

Date and Place of Next Session

55. At the invitation of the expert from Denmark, the TWC proposed to hold its twenty -first session in Tjele, Denmark, from June 10 to 13, 2003.

Program for the Next Session

56. During the twenty -first session, the TWC planned to discuss or re -discuss the following items: Reports from members and observers; Report on developments within UPOV; Molecular techniques; Project to Consider the Publication of Variety Descriptions ; UPOV Databases; Chi square distribution; Alternative method to COYU when the requirements on degrees of freedom for COYU are not fulfilled; Relative tolerances in the number of off-types; Incomplete block design; Glossary on Statistical Terms; Efficiency of Incomplete Block Design in DUS Herbage Trials; Calculation of phenotypic distances; TGP documents; List of statistical documents prepared by the TWC; Telecommunications, exchangeable software and contacts; Date and place of the next session; Future program; Report on the Conclusions of the Session.

Technical Working Party for Fruit Crops (TWF)

57. The TWF held its thirty -third session in San Carlos de Bariloche, Argentina, from November 25 to 29, 2002, under the chairmanship of Mr. József Harsányi (Hungary). The Report on the Conclusions is contained in document TWF/33/21 and the detailed Report is reproduced in document TWF/33/22.

Participation

58. The session was attended by 20 participants from 14 members of the Union and two observer organizations.

Ad hoc Crop Subgroup on Molecular Techniques

59. The TWF received a report on the discussions in the BMT, regarding the possible establishment of an *Ad hoc* Crop Subgroup for Peach and/or Citrus. The TWF concluded that at it would not be appropriate to propose the establishment of such a crop subgroup at this time. However, it welcomed the proposal from the expert from France to prepare a summary of work on molecular characteristics in fruit crops for review at the next TWF meeting. This summary would explain the technical progress, but would also consider whether there were plans for this work to be applied for the examination of DUS and, therefore, provide support for the establishment of a crop subgroup.

Development of TGP Documents

60. The TWF discussed a number of draft TGP documents with priority being given to TGP/7 "Development of Test Guidelines," TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity." With regard to other TGP documents, the TWF discussed TGP/13 "Guidance for New Types and Species" and TGP/14.2 "Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents: Plant Shapes."

Project to Consider the Publication of Variety Descriptions

61. With regard to the Project to Consider the Publication of Variety Descriptions, the TWF suggested that apple and strawberry be proposed for consideration by the TC for inclusion in the model study. The coordinating members would be Israel and the United Kingdom, respectively.

Draft Test Guidelines to be Submitted to the Technical Committee

62. The TWF agreed that the following draft Test Guidelines should be submitted to the TC for approval in April 2003: Cheri moya, Grapefruit and Pummelos (Revision), Lemons and Limes (Revision), Mandarin (Revision), Oranges (Revision), *Poncirus*, Persimmon (Revision), Quince (Revision) and Raspberry (Revision).

Draft Test Guidelines to be Discussed at the TWF in 2003

63. The TWF decided to discuss further the following draft Test Guidelines at its next session in 2003: Apple (Revision), Apricot (Revision), Avocado (Revision), Cactus Pear (Opuntia) and Mango (Revision). The TWF also decided to discuss drafts of the following Test Guidelines at its next session: Banana (*Musa* spp.) (Revision), Blackberry and Hybrid Berries (Revision), Coffee, Fig, Passion Fruit (edible species), Pecan nut (*Carya illinoensis*) and Pineapple. The TWF agreed to propose to the TC that the TWF should be the leading TWP for the Test Guidelines for Coffee.

Date and Place of Next Session

64. At the invitation of Canada, the TWF proposed to hold its thirty-fourth session, in Niagara Falls, Canada, from September 29 to October 3, 2003.

Program for the Next Session

65. During its thirty-fourth session, the TWF planned to discuss the following items: Short reports on developments in plant variety protection from members and observers; Report on developments within UPOV; Molecular techniques; Project to Consider the Publication of Variety Descriptions; UPOV databases; Standardized explanation for "maturity of fruit" characteristics; TGP documents; Draft Test Guidelines; Recommendations on draft Test Guidelines; Date and place of the next session; Future program; Report on the Conclusions of the Session.

Technical Working Party for Ornamental Plants and Forest Trees (TWO)

66. The TWO held its thirty-fifth session in Quito, from November 18 to 22, 2002, under the Chairmanship of Miss Elizabeth Scott (United Kingdom). The Report on the Conclusions is contained in document TWO/35/22 and the detailed Report appears in document TWO/35/23.

Participation

67. The session was attended by 31 participants from 15 members of the Union and two observer organizations.

Adhoc Crop Subgroup on Molecular Techniques

68. The Chairman of the Rose Crop Subgroup reported that the meeting of the Rose Crop Subgroup, planned to take place prior to the meeting of the TWO, had been postponed because only one paper had been proposed.

Development of TGP Documents

69. The TWO discussed a number of draft TGP documents with priority being given to TGP/7 "Development of Test Guidelines," TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity." With regard to other TGP documents, the TWO discussed TGP/8.6 Draft 1 "Examining DUS in Bulk Samples."

Project to Consider the Publication of Variety Descriptions

70. With regard to the Project to Consider the Publication of Variety Descriptions, the TWO proposed that the model study should include Petunia.

Questionnaire on Testing of Seed - Propagated Ornamental Varieties

71. The TWO discussed document TWO/35/16, "Results of the Questionnaire on Testing of Seed-Propagated Ornamental Varieties." It was agreed that this survey should be repeated over the next three years in order to know the species for which the demand for the preparation of Test Guidelines was greatest.

Preparatory Workshop

72. The TWO heard that a preparatory workshop, held the day before the start of the session, was attended by 16 participants from five different countries and one observer organization. Comments on the workshop had been favorable and the following proposals had been made: to circulate copies of the workshop documents and presentations, to the participants, in advance of the workshop; to include an item on how to use the UPOV Website; to continue the practice of organizing a preparatory workshop before the TWO.

Draft Test Guidelines to be Submitted to the Technical Committee

73. The TWO agreed that the following draft Test Guidelines should be presented to the TC in April 2003: *Bracteantha*; *Calibrachoa*; *Dendrobium*; *Leptospermum*; Ornamental Apple; *Petunia*; *Phalaenopsis*; Willow (Revision).

Draft Test Guidelines to be Discussed at the TWO session in 2003

74. The TWO had agreed that the Test Guidelines for Verbena could be submitted to the TC for adoption at its thirty-ninth session in April 2003. However, the experts later agreed to discuss the document again at the TWO in 2003. The TWO also agreed that the following

draft Test Guidelines should be discussed at the TWO in 2003: Alstroemeria (Revision); Argyranthemum; Brachyscome; *Catharanthus roseus*; Chrysanthemum (Revision); Clematis; Dahlia; Diascia; Hibiscus; Hypericum (berry -producing species); Gypsophila; Impatiens walleriana; Poinsettia (Revision); Rose (Revision -all types); Tagetes; Verbena; Waxflower.

Date and Place of Next Session

75. At the invitation of Canada, the TWO proposed to hold its thirty -sixth session in Niagara Falls, Canada, from September 22 to 26, 2003.

Program for the Next Session

76. During the thirty -sixth session, the TWO planned to discuss or re -discuss the following items: Short reports on developments in plant variety protection; Molecular techniques; Project to consider the publication of variety descriptions; UPOV databases; TGP documents; Survey on "Testing of Seed -Propagated Ornamental Varieties"; Uniformity requirements for variegated varieties; Discussions on draft Test Guidelines (Subgroups); Recommendations on draft Test Guidelines (plenary); Date and place of the next session; Future program; Report on the Conclusions of the Session.

Technical Working Party for Vegetables (TWV)

77. The TWV held its thirty -sixth session in Tsukuba, Japan, from September 9 to 13, 2002, under the chairmanship of Ms. Julia Borys (Poland). The Report on the Conclusions is contained in document TWV/36/13, and the detailed Report appears as document TWV/36/14.

Participation

78. The session was attended by 63 participants from 14 members of the Union, seven observer States and two observer organizations. The participants included the trainees from a three -month PVP training course organized by the Japan International Cooperation Agency (JICA) from September to October 2002.

Molecular Techniques

79. With regard to the report on developments in UPOV concerning molecular techniques, the TWV agreed that Option 1 (a) (Use of molecular characteristics which are directly linked to traditional characteristics) as explained in document TC/38/14 -CAJ/45/5, would be useful for the detection of certain vegetable characteristics, such as disease resistance and male sterility, and could be considered in conjunction with the discussion of individual Test Guidelines documents. The TWV observed that the usefulness of Option 2 (Calibration of threshold levels for molecular characteristics against the minimum distance in traditional characteristics) for the management of reference varieties in DUS testing for vegetable varieties was worthy of examination. However, the examination by the TWV in this area would depend on the availability of data on both molecular and conventional distances.

80. The TWV noted that the first meeting of the *Ad hoc* Crop Subgroup on Molecular Techniques for Mushroom would be held on the afternoon of Friday, September 13, 2002, and supported the nomination of Mr. van Marrewijk as Chairman of the Subgroup.

Development of TGP Documents

81. The TWV discussed a number of draft TGP documents with priority being given to TGP/7 "Development of Test Guidelines," TGP/4 "Management of Variety Collections," TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity." With regard to other TGP documents, the TWV discussed TGP/3.2 "Developments and Explanations Regarding Varieties of Common Knowledge" and TGP/12.1 "Characteristics Expressed in Response to External Factors: Disease Resistance." The TWV recalled that it had proposed, at its thirty-fifth session, that a separate TGP document be prepared on scent and flavor (TGP/12.4). However, the TWV considered that it did not have sufficient experience and knowledge, for the time being, to use scent or flavor characteristics for the conduct of DUS testing for vegetable varieties.

Project to Consider the Publication of Variety Descriptions

82. The TWV received an oral report from the Office on the latest developments in the Project to Consider the Publication of Variety Descriptions. The TWV agreed that Chinese Cabbage and Lettuce should be placed on the short list of species for which a model study could be conducted and noted that Mr. Kees van Ettehoven (Netherlands) and Mr. Keiji Tanaka (Japan) would act as coordinators of the respective crop species.

Draft Test Guidelines to be Submitted to the Technical Committee

83. The TWV agreed that draft Test Guidelines for Basil, Broad Bean (Revision), Chinese Cabbage (Revision), Chinese Chive, Chives, Endive (Revision), Lentil, Lettuce (Revision) and Runner Bean (Revision) should be submitted to the TC for adoption.

Draft Test Guidelines to be Discussed at the TWV session in 2003

84. The TWV agreed to discuss or re-discuss draft Test Guidelines for Husk Tomato, Melon, Mushroom, Perilla and Rosemary during its next session.

85. The TWV agreed to seek the advice of the Chairman of the TWV on whether the draft Test Guidelines for Perilla, as amended, should be considered by the TWV.

Date and Place of Next Session

86. At the invitation of the expert from the Netherlands, the TWV proposed to hold its thirty-seventh session in Roelofarendsveen, Netherlands, from June 23 to 27, 2003.

Program for the Next Session

87. At its thirty-seventh session, the TWV planned to discuss or re-discuss: Short reports on developments in plant variety protection; Report on the last session of the TC and recommendations resulting from that session; Molecular techniques; TGP documents; Discussion on draft Test Guidelines for: Brussels Sprout (Revision); Cabbage (Revision);

Carrot(Revision);Chard/LeafBeet(Revision);Ginseng; HuskTomato ; Melon(Revision); Mushroom; Parsnip; Perilla; Rosemary; Watermelon (Revision); Date and place of the next session; Future program; Report on the Conclusions of the Session.

Working Group on Biochemical and Molecular Techniques, and DNA Profiling in Particular (BMT)

88. The BMT has not met since the thirty-eighth session of the TC.

Date and Place of Next Session

89. At the invitation of Japan, the BMT will hold its eighth session in Tsukuba, Japan, from September 3 to 5, 2003.

Program for the Next Session

90. At its eighth session, the BMT planned to discuss: Short presentations by DUS experts, biochemical and molecular specialists and plant breeders on new developments in biochemical and molecular techniques; Reports from the Review Group, TC and Crop Subgroups; Report of work on molecular techniques on a crop-by-crop basis, including methods to assess the potential impact on the strength of variety protection; Development of guidelines on the suitability and application of different biochemical and molecular methods for variety characterization; Review of the costs of molecular techniques; Construction and standardization of databases of molecular characteristics of plant varieties; Statistical methods for data produced by biochemical and molecular techniques; The use of molecular techniques in examining essential derivation; Future program, date and place of the next session; Report on the Conclusions of the Session.

91. *The Council is invited*

(a) *to note the work of the TC and that of the TWPs and BMT reported to the TC, as provided in this document,*

(b) *to approve the work program of the TC and the work programs of the TWPs and BMT reported to the TC, as provided in this document.*

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