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# INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

## COUNCIL

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#### PROGRESS REPORT OF 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 of 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).
2. The following abbreviations are used in this document:

CAJ:	Administrative and Legal Committee
TC:	Technical Committee
TC-EDC:	Enlarged Editorial Committee
TWPs:	Technical Working Parties
TWA:	Technical Working Party for Agricultural Crops
TWC:	Technical Working Party on Automation and Computer Programs
TWF:	Technical Working Party for Fruit Crops
TWO:	Technical Working Party for Ornamental Plants and Forest Trees
TWV:	Technical Working Party for Vegetables
BMT:	Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular
BMT Review Group:	<i>Ad hoc</i> Subgroup of Technical and Legal Experts of Biochemical and Molecular Techniques
WG-PVD:	<i>Ad hoc</i> Working Group on the Publication of Variety Descriptions
Crop Subgroups:	<i>Ad hoc</i> crop subgroups for molecular techniques
DUS:	Distinctness, Uniformity and Stability
Office:	Office of the Union

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## I. PROGRESS REPORT OF THE WORK OF THE TECHNICAL COMMITTEE

3. The Technical Committee (TC) held its forty-fourth session in Geneva from April 7 to 9, 2008, chaired by Mr. Chris Barnaby (New Zealand), Chairperson of the TC. The report on the conclusions of that session is contained in document TC/44/12. The detailed report will be provided as document TC/44/13.

### Participation

4. The meeting was attended by 94 participants from 45 members of the Union, one observer State and three observer organizations.

### Report on developments in UPOV including relevant matters discussed in the last sessions of the Administrative and Legal Committee, the Consultative Committee and the Council

5. The Vice Secretary-General provided an oral report on the fifty-fifth and fifty-sixth sessions of the Administrative and Legal Committee (CAJ), the seventy-third and the seventy-fourth sessions of the Consultative Committee as well as the twenty-fourth extraordinary session and the forty-first 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 Subgroups on Molecular Techniques

6. 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 Ad hoc Crop Subgroups on Molecular Techniques (Crop Subgroups) for Maize, Potato and Rose. Part II of this document "Progress Report of the Work of the Technical Working Parties and the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular" provides the information presented in the oral reports made by the Chairpersons of the TWA, TWC, TWF, TWO and TWV. The TC noted that no session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) had been held since the forty-third session of the TC.

### Matters arising from the Technical Working Parties

7. The TC considered documents TC/44/3 and TC/44/3 Add..

### *Test Guidelines*

8. The TC noted the practical guide for drafters of Test Guidelines (Practical Guide) presented in document TC/44/3, Annex I. It also noted the creation of a new web page (TG webpage) which was accessible by a password issued to all Leading Experts.

9. The TC discussed the possible establishment of a list of experts willing to provide guidance in the development of authority test guidelines and agreed to consider that matter in its discussion on items to be considered in the revision of document TGP/7 “Development of Test Guidelines”.

10. The TC agreed to recommend to the Technical Working Parties (TWPs), at their sessions in 2008, to consider the results of the shape exercise, as presented in document TWV/41/10 Rev., in conjunction with their discussions on document TGP/14 and agreed to the organization of a meeting to discuss the development of TGP/14/1 Section 2, Subsection 3 “Color” on May 30 and 31, 2008.

11. The TC agreed to request the TWA to consider document BMT-TWA/Maize/2/8 with regard to the discriminatory power of morphological characteristics.

*Matters arising after the grant of a breeder’s right*

12. The TC noted the TWV proposal for the possible development of a document to provide guidance on matters concerning distinctness, uniformity, stability and novelty which are brought to the attention of an authority after the grant of a breeder’s right and the status and use of the “official” variety description. The TC also noted the comments of the TC-EDC that there would be practical advantages in dealing with all aspects of stability in a single document and the proposal of the TC-EDC that the TC, in conjunction with the CAJ, might consider an amendment to the title of TGP/11, with the document being clearly separated into two parts:

Part I: Examining Stability (Article 12 “Examination of the Application”, of the 1991 Act of the UPOV Convention)

Part II: Stability after the grant of a breeder’s right (Article 22(1) “Cancellation of the Breeder’s Right”, of the 1991 Act of the UPOV Convention)

13. The TC agreed that the view of the CAJ should be sought with regard to whether it would be appropriate to pursue those proposals.

*Exchangeable software and database to search for TWC working documents*

14. The TC agreed that, as proposed by the TWC, the title of the database to search for TWC working documents should be amended to “Database to research TWC working documents” and agreed that a warning on the status of the documents and the purpose of the database should be automatically presented at each opening of the database. It also agreed that the CDs containing the database should only be distributed to the participants at the relevant TWC session. The TC noted that the TWC had confirmed the value of the database as a tool for TWC experts to develop new methods.

15. The Chairman proposed that, in order for information on exchangeable software to be more accessible to members of the Union and to facilitate regular updating, it might be appropriate to present information, on an annual basis, in a TC document similar to document TC/44/4 “List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability”. That document could provide members of the Union with information on the existence and availability of software. He proposed that the document should include software concerning, for example, databases of images / photographs, image analysis etc.. It was further proposed that the software should be

presented and discussed at a TWC session prior to inclusion in the document. The TC agreed with the proposal and requested the TWC to formulate the structure and content of the document for consideration by the TC at its forty-fifth session.

#### TGP documents

16. The TC considered documents TC/44/5 and TC/44/11.

(a) *TGP documents to which the Technical Committee has given highest priority:*

*TGP/4: Constitution and Maintenance of Variety Collections*

17. The TC proposed the adoption of document TGP/4/1 by the Council at its twenty-fifth extraordinary session, to be held in Geneva on April 11, 2008, on the basis of document TGP/4/1 Draft 10, as amended at its forty-fourth session.

*TGP/9: Examining Distinctness*

18. The TC noted that the Council, at its twenty-fifth extraordinary session, to be held in Geneva on April 11, 2008, would be invited to adopt document TGP/9/1 on the basis of document TGP/9/1 Draft 10.

*TGP/10: Examining Uniformity*

19. The TC considered document TC/44/11 in conjunction with document TGP/10/1 Draft 9.

20. With regard to applications covering a combination of lines, as considered in document TC/44/11, the TC noted the discussions in the TWPs and noted that the conclusions of the TWPs were reflected in the proposals concerning document TGP/10/1 Draft 9, Section 1.2 (Introduction) and Section 2.4 "Segregating characteristics". It agreed that further specific examples might be put forward by for consideration by the TWPs at their sessions in 2008, and subsequently by the TC at its forty-fifth session. However, it agreed that the title of any future agenda item and document should be "Combination of lines or varieties".

21. The TC proposed the adoption of document TGP/10/1 by the Council at its forty-second ordinary session, to be held in Geneva on October 30, 2008, on the basis of document TGP/10/1 Draft 9, as amended at its forty-fourth session.

22. The TC noted that the French, German and Spanish language versions of document TGP/10/1 Draft 9, as amended above, would be checked by the respective language experts of the Editorial Committee before submission to the Council for adoption.

(b) *Revision of TGP documents:*

*TGP/5: Experience and Cooperation in DUS Testing*

23. The TC proposed that all sections of document TGP/5 should be reviewed with regard to the possibility of confusion arising from their application to use in relation to official

registers, for example, of varieties admitted to trade (e.g. National List, Official Catalogue etc.).

24. The TC made proposals concerning the drafts of the Introduction and Sections 1, 2, 4, 5, 6, 7 and 11 of document TGP/5.

*TGP/7: Development of Test Guidelines*

25. The TC noted the proposals made with regard to the revision of document TGP/7/1, as set out in Annex II to document TC/44/5, and agreed certain additional proposals which should be included for discussion in relation to the revision of document TGP/7/1.

(c) *Other TGP documents:*

*TGP/8: Use of Statistical Procedures in DUS Testing*

26. The TC considered the proposed structure and content of document TGP/8/1 Draft 9 and agreed certain amendments.

*TGP/11: Examination of Stability*

27. The TC considered document TGP/11/1 Draft 4. It recalled that it had agreed to invite the CAJ to consider an amendment to the title of TGP/11 (see paragraph 13) and did not have any further comments on document TGP/11/1 Draft 4 in detail.

*TGP/12: Special Characteristics*

28. The TC considered document TGP/12/1 Draft 4 and agreed certain amendments.

*TGP/13: Guidance for New Types and Species*

29. The TC considered document TGP/13/1 Draft 11 and agreed certain amendments.

*TGP/14: Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents*

30. The TC agreed that the TWPs, at their sessions in 2008, should consider the results of the shape exercise, as presented in TWV/41/10 Rev., in conjunction with their discussions on document TGP/14.

31. The TC agreed to the organization of a meeting to discuss the development of TGP/14/1 Section 2, Subsection 3 “Color” on May 30 and 31, 2008.

32. The TC agreed that “Section 1: Technical Terms” should be updated with relevant terms from documents TGP/4 and TGP/9 and heard that Australia would make some suggestions to the Office in that respect.

33. The TC agreed that it would consider whether to await the adoption of document TGP/8 before finalizing TGP/14, if that became necessary.

*(d) Program for the Development of TGP Documents*

34. The TC agreed the program for the development of TGP documents, as set out in Annex III to document TC/44/5, subject to CAJ consideration of whether to delay the adoption of the TGP/5 Sections until 2009.

Molecular techniques

35. The TC considered documents TC/44/7 and BMT Guidelines (proj.11).

*Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction ("BMT Guidelines")*

36. The TC noted the comments from China, Ukraine and the United States of America incorporated in document BMT Guidelines (proj.11). It noted that a number of the comments concerned technical aspects of the BMT Guidelines and concluded that, in the first instance, those were matters which would need to be addressed by the BMT. The TC agreed that the BMT should be invited to consider those matters in the form of a new draft of the BMT Guidelines at its eleventh session, to be held in Madrid, from September 16 to 18, 2008.

37. The TC noted the request of the Consultative Committee that consideration be given to the status of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. with regard to their reference in the introduction of document BMT Guidelines (proj.11). The TC noted that documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. would need to be reviewed in conjunction with discussions on the approach presented in documents BMT/10/14 and BMT-TWA/2/11, as explained in document TC/44/7, paragraph 30. On that basis, it agreed that it would be appropriate to submit a revised version of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. to the Council in conjunction with the BMT Guidelines.

*Ad Hoc Crop Subgroups on Molecular Techniques (Crop Subgroups)*

38. The TC considered the conclusions of the Crop Subgroups for Rose, Potato and Maize and agreed to:

(a) invite the International Seed Testing Association (ISTA) and the Organisation for Economic Co-operation and Development (OECD) to make a presentation on their joint work on harmonization in the development of sets of markers which might be used for variety verification, at the eleventh session of the BMT;

(b) the proposal for the Crop Subgroup for Rose to hold its third session in conjunction with the eleventh session of the BMT, at which time the matters raised in paragraph 25 of document TC/44/7 would be considered further;

(c) to propose to the CAJ that the approach presented in documents BMT/10/14 and BMT-TWA/2/11 be put forward for consideration at the *Ad hoc* Subgroup of Technical and Legal Experts of Biochemical and Molecular Techniques (BMT Review Group) as a potential option for the use of molecular markers in DUS examination (see paragraphs 30 and 34 of document TC/44/7); and

(d) the proposal for the Crop Subgroup for Maize to hold its next session in late 2009, tentatively in conjunction with the maize and sorghum breeders' meeting in the United States of America, as set out in paragraph 34 of document TC/44/7.

#### *Technical Working Parties*

39. The TC noted the reports of discussions in the TWPs and approved Mr. Michael Camlin (United Kingdom) as Chairman of the Crop Subgroup for Wheat and Barley.

40. The TC noted the change of date and location of the eleventh session of the BMT, which is to be held in Madrid, Spain, from September 16 to 18, 2008.

#### UPOV information databases

41. The TC considered document TC/44/6.

#### *GENIE database*

42. The TC noted that the GENIE database would be launched in all four UPOV languages on the freely available area of the UPOV website in 2008.

#### *UPOV Code System*

43. The TC noted that there was no immediate need to allow flexibility in the species element of the UPOV code in order to cover a classification into, for example, subgenera and/or sections, between the genus and species level of classification.

44. The TC noted the information provided in the Annex to document TC/44/6 "Report on the Use of UPOV Codes by Members of the Union and Other Contributors" and noted that, since that report was made, Australia and Spain were providing UPOV codes for their UPOV-ROM entries and that France was providing UPOV codes for all its entries.

45. The TC noted the plans for the TWP sessions in 2008 for the checking of UPOV codes by the relevant authorities, according to the procedure set out in Section 3.3 of the Guide to the UPOV Code System (see [http://www.upov.int/genie/en/upov\\_code.html](http://www.upov.int/genie/en/upov_code.html)).

46. The TC noted that the Office would need to amend a small number of UPOV codes in accordance with the procedure set out in the "Guide to the UPOV Code System", Section 3 "Procedure for the introduction and amendment of UPOV codes" (see [http://www.upov.int/genie/en/upov\\_code.html](http://www.upov.int/genie/en/upov_code.html)).

47. With regard to advice for members of the Union on the botanical classification of varieties under examination, Mr. Kees van Ettehoven (Netherlands), President of the International Association for Cultivated Plant Taxonomy (IACPT) informed the TC that the IACPT might be able to provide assistance in such matters and suggested that experts raise any requests via their website ([www.iacpt.net](http://www.iacpt.net)).

48. At the proposal of the Delegation of the Republic of Korea, the TC agreed that an item on the inclusion of UPOV codes in UPOV-ROM data be included in the workshop on data handling, to be held in conjunction with the twenty-sixth session of the TWC in Jeju, Republic of Korea.



*Plant Variety Database*

49. The TC noted the offer of the Community Plant Variety Office of the European Community (CPVO) for assistance in the collection of data for all UPOV-ROM contributors on behalf of which it does not currently provide data (see “Memorandum of Understanding between UPOV and the CPVO” (MoU)). It was recognized that further practical guidance on how to submit data under such an arrangement would need to be provided. The TC noted that all background information concerning the data included in the UPOV-ROM, in particular the information in the “Content.pdf” document, would also be maintained by the CPVO in such an approach.

50. With regard to the general information documents which would no longer be included in the UPOV-ROM, as set out in document TC/44/6, paragraph 19, the TC agreed that the Office should specify which documents would no longer be included.

51. The TC agreed that the proposal made in document TC/44/6, paragraphs 15 to 22, and a draft revised “Memorandum of Understanding between UPOV and the CPVO” (MoU), based on that proposal, be prepared for consideration by the Consultative Committee at its seventy-sixth session, to be held in Geneva on October 29, 2008.

52. The TC noted that the introduction of a field in the Plant Variety Database to indicate the dates on which a variety was commercialized for the first time in the territory of application and other territories as provided in the UPOV Model Form for the Application for Plant Breeders’ Rights (see document TGP/5: Section 2/2 Draft 1, item 8.) was primarily a matter for the CAJ. Some delegations explained the benefits of including such information in the UPOV-ROM, whilst some delegations expressed concerns with regard to the data which would be included. It was noted that data on commercialization would, in most cases, need to be based on information provided by the applicant and the TC agreed that this aspect should be taken into account when considering such an approach.

53. The TC noted the situation concerning the development of a web-based version of the Plant Variety Database and the development of a common search platform.

Variety denominations

54. The TC considered document TC/44/8.

55. The TC received an oral report from Mr. Kees van Ettehoven (Netherlands), IACPT President, on the aims of the IACPT.

56. The TC agreed to invite the TWV to propose a clarification of Class 211 “Edible Mushrooms”, as set out in paragraphs 4 and 5 of document TC/44/8.

Publication of variety descriptions

57. The TC noted the report presented in document TC/44/9.

### Preparatory workshops

58. The TC noted the report of the preparatory workshops held in 2007 and the proposals for the proposed program for 2008 as set out in document TC/44/10.

### Applications covering a combination of lines

59. The TC noted that document TC/44/11 had been considered in conjunction with document TGP/10/1 Draft 9.

### Vice-Chairperson of the Technical Committee

60. The TC proposed to the Council that it elect, at its session in October 2008, Mr. Joël Guiard (France) as Vice-Chairperson of the TC for the term 2008 to 2010.

### Chairmanship of the Technical Working Parties

61. The TC noted that the terms of office for the Chairpersons of the TWPs and the BMT would expire with the ordinary session of the Council in 2008. As suggested by the respective TWP, the TC proposed to the Council that it elect, in its session in October 2008, the following persons as Chairpersons for the period 2009-2011:

TWA:	Mr. Dirk Theobald (European Community)
TWC:	Mr. Gerie van der Heijden (Netherlands)
TWF:	Mrs. Bronislava Bátorová (Slovakia)
TWO:	Ms. Andrea Menne (Germany)
TWV:	Mrs. Radmila Safarikova (Czech Republic)

### Chairperson of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT)

62. The TC proposed to the Council that it elect, at its session in October 2008, Mr. Andrew Mitchell (United Kingdom) as Chairperson of the BMT for the term from 2009 to 2011.

### Test Guidelines

63. The TC considered document TC/44/2.

64. The TC adopted the Test Guidelines listed in the table below on the basis of the amendments, as specified in Annex II to document TC/44/12 "Report on the Conclusions", which was circulated in advance, and the linguistic changes recommended by the TC-EDC:

Document No. N° du document Dokument-Nr. No del documento	English	Français	Deutsch	Español	Botanical name Nom botanique Botanischer Name Nombre botánico
TG/16/8 Annex	Rice: example varieties (North East Asia)	Riz: exemples de variétés (Asie du Nord-Est)	Reis: Beispielsorten (Nordostasien)	Arroz: variedades ejemplo (Asia del Nordeste)	<i>Oryza sativa</i> L.
TG/22/10(proj.3)	Strawberry	Fraisier	Erdbeere	Fresa, Frutilla	<i>Fragaria</i> L.
TG/24/6(proj.3)	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern	Flor de Pascua	<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch
TG/40/7(proj.5)	Blackcurrant, Black Currant	Cassis	Schwarze Johannisbeere	Grosellero negro, Casis	<i>Ribes nigrum</i> L.
TG/46/7(proj.5)	Onion, Shallot, Grey Shallot	Oignon, Échalote, Échalote grise	Zwiebel, Schalotte, Graue Schalotte	Cebolla, Chalota	<i>Allium cepa</i> (Cepa Group), <i>Allium cepa</i> (Aggregatum Group) and <i>Allium oschaninii</i> O. Fedtsch. and hybrids between them
TG/50/9(proj.3)	Grapevine	Vigne	Rebe	Vid	<i>Vitis</i> L.
TG/60/7(proj.3)	Beetroot, Garden Beet	Betterave rouge, Betterave potagère	Rote Rübe, Rote Bete	Remolacha de cocona, Remolacha de mesa, Remolacha roja	<i>Beta vulgaris</i> L. var. <i>conditiva</i> Alef., <i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>esculenta</i> L., <i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>hortensis</i>
TG/78/4(proj.4)	Kalanchoe	Kalanchoe	Flammendes Kätchen	Kalancho	<i>Kalanchoe blossfeldiana</i> Poelln. and its hybrids
TG/85/7(proj.3)	Leek	Poireau	Porree	Puerro	<i>Allium porrum</i> L.
TG/152/4(proj.4)	Chamomile	Camomille	Kamille	Manzanilla	<i>Matricaria recutita</i> L., <i>Chamomilla recutita</i> (L.) Rauschert
TG/176/4(proj.3)	Osteospermum	Ostéospermum	Osteospermum	Osteospermum	<i>Osteospermum</i> L. and hybrids with <i>Dimorphotheca</i> Vaill.
TG/193/1(proj.5)	Bird's foot trefoil; Big trefoil; Broad leaf trefoil; Narrow leaf trefoil; Lotus subbiflorus	Cornette, cube, Lotier corniculé; - ; Lotier velu; Lotier des marais; - ; -	Hornschotenklee, Hornklee; - ; Sumpfschotenklee, Sumpf-Hornklee; Schmalblättriger Hornklee; -	Loto de los prados; Lotus pedunculatus; Loto de los pantanos; Lotus tenuis; Lotus subbiflorus	<i>Lotus corniculatus</i> L.; <i>Lotus pedunculatus</i> Cav.; <i>Lotus uliginosus</i> Schkuhr; <i>Lotus tenuis</i> Waldst. et Kit. ex Willd., <i>Lotus glaber</i> Mill.; <i>Lotus subbiflorus</i> Lag., <i>Lotus suaveolens</i> Pers.
TG/AMARAN(proj.9)	Amaranth	Amarante	Amarant, Fuchsschwanz	Amaranto	( <i>Amaranthus</i> L. excluding ornamental varieties)
TG/COFFEE(proj.7)	Coffee	Caféier	Kaffee	Cafeto	<i>Coffea arabica</i> L.; <i>C. canephora</i> Pierre ex A. Froehner; <i>C. arabica</i> × <i>C. canephora</i> hybrids
TG/FESTL(proj.5)	Festulolium	Festulolium	Festulolium	Festulolium, Festuca, Canuëla	× <i>Festulolium</i> Aschers. et Graebn.
TG/HAWTH(proj.6)	Hawthorn	Aubépine	Weißdorn	Espino, Espinero, Manzanilla, Marjoleto, Marzoletto, Tejocote	<i>Crataegus</i> L.
TG/HIPPH(proj.4)	Common Sea Buckthorn, Sallowthorn, Sea-buckthorn	Argasse, Argousier, Grisset	Sanddorn	Espino amarillo, Espino falso	<i>Hippophae rhamnoides</i> L.
TG/NEMES(proj.3)	Nemesia	Nemesia	Nemesia	Nemesia	<i>Nemesia</i> Vent.
TG/PORTU(proj.4)	Portulaca, Purslane	Pourpier	Portulak	Verdolago	<i>Portulaca oleracea</i> L.

Document No. N° du document Dokument-Nr. No del documento	English	Français	Deutsch	Español	Botanical name Nom botanique Botanischer Name Nombre botánico
TG/ROCK_DIP(proj.2)	Lincoln's-weed, Sand mustard, Sand rocket, Wall rocket, Wild rocket	Roquette sauvage	Wilde Rauke	Roqueta silvestre	Diplotaxis tenuifolia (L.) DC.
TG/ROCK_ERU(proj.2)	Arugula, Cultivated Rocket, Garden Rocket, Rocket-salad, Rugula, Salad Rocket	Roquette cultivée	Ölrauke, Rauke, Ruke, Rukola, Senfrauke	Oruga común, Roqueta	Eruca sativa Mill.
TG/TEA(proj.6)	Tea	Théier	Tee, Teestrauch	Té	Camellia sinensis (L.) O. Kuntze

65. With regard to the adoption of the Test Guidelines for Coffee (document TG/COFFEE(proj.7)), the TC further agreed that the adoption was subject to any further asterisked characteristics being agreed by the TWA and TWF, either by correspondence or at their respective sessions.

66. With regard to the adoption of the Test Guidelines for Poinsettia (document TG/24/7(proj.3)), the TC further agreed that the adoption was subject to any changes to the example varieties being agreed by the TWO, either by correspondence or at its forty-first session.

67. The Delegation of the Republic of Korea reported that it had identified an additional state of expression for characteristic 23 in the Test Guidelines for Onion TG/46/7(proj.5). It was agreed that that development should be considered by the TWV at its session in 2008 but that, in the meantime, the Test Guidelines for Onion should be adopted on the basis of document TG/46/7(proj.5), as amended in Annex II to document TC/44/12 "Report on the Conclusions". The TC noted that an additional state of expression could be accommodated by a partial revision of the Test Guidelines at a subsequent TC session.

68. The TC noted that the note "(3)" had been omitted from the end of the comment on Char. 9 of the comments concerning the Test Guidelines for Beetroot TG/60/7(proj.3).

69. The TC noted a report from the Delegation of Japan that, at the thirty-ninth session of the TWF, to be held in 2008, there would be an item on the possibility of developing a set of example varieties for North East Asia which would then require a partial revision of the Test Guidelines for Strawberry in 2009 or 2010.

70. With regard to document TC/44/2, Annex II, the TC heard that the Leading Expert from Israel had requested that the European Community take over the role of Leading Expert for the Test Guidelines for Gypsophila. The TC agreed to that change.

List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability

71. The TC noted the information provided in document TC/44/4 and heard that the number of genera and species for which members of the Union had indicated practical experience had increased from 2,010 in 2007 to 2,179 in 2008.

72. In response to the observation of the Delegations of Spain, France and Germany, that some of the data contained in the document was not correct, the Office clarified that it was a matter for each member of the Union to notify the Office of any need for amendments. Those amendments would be made in the GENIE database as soon as possible and would subsequently be reflected in the corresponding document at the forty-fifth session of the TC.

73. The TC noted that there were some mistakes in the ISO codes and country names in pages 2 to 5 of document TC/44/4, which the Office undertook to correct in a revised version of the document.

74. The TC agreed that document TC/44/4 should be updated for the forty-fifth session of the TC.

#### Program for the forty-fifth session

75. The following draft agenda was agreed for the forty-fifth session of the TC to be held in Geneva in 2009:

1. Opening of the session
2. Adoption of the agenda
3. Report on developments in UPOV including relevant matters discussed in the last sessions of the Administrative and Legal Committee, the Consultative Committee and the Council (oral report by the Vice Secretary-General)
4. 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 Crop Subgroups
5. Matters arising from the Technical Working Parties
6. TGP documents
7. UPOV information databases
8. Molecular techniques
9. Variety denominations
10. Publication of variety descriptions
11. Preparatory workshops
12. Applications covering a combination of lines or varieties
13. List of exchangeable software
14. Electronic application systems
15. Test Guidelines

16. List of genera and species for which authorities have practical experience in the examination of Distinctness, Uniformity and Stability
17. Program for the forty-sixth session
18. Adoption of the report on the conclusions reached in the session (if time permits)
19. Closing of the session

## 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

76. The following reports were made by the Chairpersons on the work of the TWA, TWC, TWF, TWO and TWV at the forty-fourth session of the TC. No session of the BMT was held between the forty-third and forty-fourth session of the TC. The following reports were also made to the TC on the work of the *Ad Hoc* Crop Subgroups on Molecular Techniques for Maize, Potato and Rose.

### Technical Working Party for Agricultural Crops (TWA)

77. The TWA held its thirty-sixth session in Budapest, Hungary, from May 28 to June 1, 2007, under the chairmanship of Mrs. Beate Rucker (Germany). The report of the meeting is contained in document TWA/36/10.

78. The session was attended by 65 participants from 29 members of the Union, one observer state, and two observer organizations. The preparatory workshop, held during the afternoon of Sunday, May 27, was attended by 26 participants.

79. The TWA was welcomed by Mrs. Katalin Ertsey, Director, Directorate for Plant Production and Horticulture, Central Agricultural Office. The TWA received short reports on developments in plant variety protection by the participants.

80. The TWA discussed developments on molecular techniques and noted the importance of practical experience on a crop-by-crop basis in order to analyze the potential use of these techniques. The TWA was informed about several ongoing projects in maize, potato, oilseed rape and sunflower. It received a short report on the meeting of the Crop Subgroup on Potato held on April 17, 2007. The TWA agreed to propose Mr. Michael Camlin (United Kingdom) as new chairman for the Crop Subgroup for Wheat and Barley.

81. The TWA considered a number of draft TGP documents according to the program agreed by the TC. In relation to TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”, it agreed to have a detailed discussion in 2008, when the document would be more advanced. The TWA agreed that there was not an urgent need for TGP/11 “Examining Stability” to be developed for agricultural crops for the time being because it contained relatively little substance beyond what was already contained within the General Introduction. With regard to the proposed clarification of the terms “breeder”, “applicant” and “original breeder” in document TGP/5 “Experience and Cooperation in DUS Testing”, the TWA noted that that would imply a significant change to the way in which those terms were used by many members and urged the CAJ to take that into account.

82. The TWA discussed developments concerning UPOV information databases. It agreed that it would be appropriate to allow flexibility in the species element of the UPOV code in order to cover further possibilities of classification. The UPOV code amendments were to be circulated to the TWPs when the Oracle version of the GENE database was completed.

83. The TWA discussed the project to consider the publications of variety descriptions and noted that there were significant problems in harmonizing variety descriptions at the international level. The representative of the European Seed Association (ESA) recalled its

enthusiasm for the project, and reluctantly accepted that the project would not be taken further for the time-being. The TWA was informed about ongoing ring-tests on wheat, involving seven member states of the European Community, and on rice, involving China, Japan and the Republic of Korea.

84. The TWA noted progress in the development of regional sets of example varieties for the Test Guidelines for rice and agreed that, subject to the agreement of the experts from China, Japan and the Republic of Korea, a regional sets of example varieties for East Asia could be presented for adoption by the TC in 2008.

85. The TWA discussed 14 Draft Test Guidelines. It agreed to submit to the TC the draft Test Guidelines for Amaranth, Festulolium, Lotus and Tea, which were new Test Guidelines. The TWA planned to continue discussions on 10 Test Guidelines in 2008, three of which are revisions and seven of which are new. The TWA agreed to start to establish Test Guidelines for Hemp and to revise the Test Guidelines for Durum Wheat and Swede. Five Test Guidelines are expected to be at the final stage in 2008.

86. At the invitation of the experts from South Africa, the TWA agreed to hold its thirty-seventh session in Nelspruit, South Africa, from July 14 to 18, 2008. The TWA proposed to discuss the following items at its next session: Short reports on developments in plant variety protection from members and observers; reports on developments within UPOV; developments on molecular techniques; TGP documents; UPOV information databases; development of regional sets of example varieties for the Test Guidelines for Rice; discussion on draft Test Guidelines; recommendations on draft Test Guidelines; date and place of the next session; and future program.

87. The TWA agreed to propose Mr. Dirk Theobald (European Community) as the next chairperson of the TWA.

88. On the afternoon of May 29, 2007, the TWA visited the Tordas variety trial station. During the visit, the TWA received a presentation on the plant variety testing and registration system in Hungary, by Mrs. Katalin Ertsey, and a presentation on the Hungarian plant breeding activity, by Dr. Csaba Marton, president of the Hungarian Plant Breeder's Association.

#### Technical Working Party on Automation and Computer Programs (TWC)

89. The TWC held its twenty-fifth session in Sibiu, Romania, from September 3 to 6, 2007. The session was attended by 29 participants from 14 members of the Union. The TWC was welcomed by Mr. Gabor Varga, Manager of the State Office for Inventions and Trademarks (OSIM). The session was chaired by Miss Sally Watson (United Kingdom). The report of the session is provided in document TWC/25/20. A preparatory workshop was held on the afternoon of 2nd September and was attended by 10 participants.

90. Mrs. Adriana Paraschiv, Head, Agricultural Division, OSIM, made a presentation on plant breeder's rights in Romania.

91. The TWC received a report from the Office of the Union on developments in UPOV, including developments in the use of molecular techniques. Following discussions on the development of databases for molecular data, it was agreed that presentations would be made at the next TWC on: the development and operation of a joint database of maize



morphological and isozyme data established by France, Germany, Spain and the Community Plant Variety Office of the European Community (CPVO); and also on a CPVO-funded United Kingdom database of morphological and molecular oilseed rape data.

92. Discussion of TGP documents formed an important part of the session. The TWC discussed TGP/10, TGP/8, TGP/11, TGP/12, TGP/13, TGP/14, and TGP/5.

93. The TWC discussed at length TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”, for which it has responsibility. A number of issues arose concerning the content of TGP/8. In particular the TWC agreed to the addition of: a section in part I on the quality control of DUS test observations, with examples provided in Part II; illustrative examples of the role of scale levels in DUS testing in section 4 of Part I; and a section in Part II on the assessment of uniformity by off-types on the basis of more than one sample or sub-samples. The question of whether the off-types tables in Part II should cover all UPOV recommended combinations of population standards and acceptance probabilities was raised. There is a potentially infinite number of combinations of population standards and acceptance probabilities that are possible. The inclusion of new combinations would require revision of TGP/8, which the TWC wishes to avoid. An alternative would be to direct the user to use freely-available software that could calculate the tables. The TWC seeks the advice of the TC on this matter. The TWC discussed the use of the Least Significant Difference (LSD) method and Multiple Range Test (MRT) in conjunction with the use of breeders’ data, and agreed to incorporate a section in Part I on general considerations behind the choice of statistical methods to assess distinctness. The TWC received presentations on the handling of measured quantitative characteristics and the calculation of variety descriptions. Further presentations are sought for the next session with the aim of compiling guidance on the subject to go into Part I.

94. In the light of discussions on TGP/12 “Special Characteristics”, the TWC agreed to a presentation on the use of image analysis and notions of good practice at its next session.

95. Following discussions of TGP/5 “Experience and Cooperation in DUS Testing”, the TWC had a demonstration of the German on-line application system. Presentations of other such systems are invited for the next session.

96. The TWC received a presentation on a technique to help identify, after only one year of testing, whether two varieties are likely to be distinct by COYD. It was noted that it may be of use to identify varieties to be excluded from the growing trial and to provide breeders, after one year of testing, with the probability of the variety being eventually accepted as distinct.

97. The TWC noted and appreciated the concerns of the TC with regard to a database to search for TWC documents and, in particular, the need for care with regard to the use of TWP session documents. In response, the TWC agreed that the title of the database should be changed to “Database to research TWC working documents”, that a warning on the status of the documents should be displayed each time the database was used, and that it should only be distributed to TWC participants. The TWC saw the latest version of that database and agreed that it was a very valuable research tool.

98. The TWC discussed the idea of providing information on exchangeable software in TGP/8. It agreed that a questionnaire on exchangeable software should be issued by the Office of the Union to gather information on the availability of the software and the level of support offered.

99. The TWC agreed to propose Mr. Gerie van der Heijden (Netherlands) as the next chairperson of the TWC.

100. At the invitation of the Republic of Korea, the TWC agreed to hold its twenty-sixth session in the Republic of Korea, with a provisional date set for September 2 to 5, 2008, and with a preparatory workshop on September 1.

101. During its forthcoming session the TWC planned to discuss the items reported above plus an adjustment to COY for grouping characteristics, selecting the optimum number of plants for COY, the use of Bennett's test to assess uniformity and the use of data from multiple locations in DUS testing.

#### Technical Working Party for Fruit Crops (TWF)

102. The TWF held its thirty-eighth session in Jeju, Republic of Korea, from July 9 to 13, 2007, with a preparatory workshop on the morning of July 8 and a Technical Workshop: Examination of Distinctness, Uniformity and Stability (DUS) according to the UPOV Principles, on the afternoon of July 8. The session was opened by Mr. Alejandro F. Barrientos-Priego (Mexico), Chairman of the TWF, and was welcomed by Mr. Jae-Ouk Lee, Director, Plant Variety Protection Division, National Seed Management Office (NSMO). The report of the session is provided in document TWF/38/9.

103. The session was attended by 59 participants from 12 members of the Union and one observer organization. The preparatory workshop was attended by 36 participants from 5 members of the Union and one observer organization.

104. The TWF received a presentation on Plant Variety Protection of Republic of Korea by Mr. Jae-Ouk Lee, Director, Plant Variety Protection Division, NSMO, as well as a presentation of Introduction of Fruit Breeding and Cultivation in Korea by Mr. Yong-Uk Shin Director of the Fruit Tree research Division, National Horticultural Research Institute. The TWF received oral reports from participants on developments in plant variety protection and from the Office of the Union on the latest developments within UPOV.

105. The TWF received an oral presentation on developments concerning the *Ad hoc* Crop Subgroups on Molecular Techniques (Crop Subgroups) and the Guidelines for DNA Profiling: Molecular Marker Selection and Database Construction (BMT Guidelines), as part of document TWF/38/2. It was noted that there was progress in the Crop Subgroups and advances in the BMT Guidelines as well as in database construction.

106. The TWF discussed a number of draft TGP documents. In relation to TGP/10/1 Draft 7 "Examining Uniformity" a total of 23 observations were suggested, most of them in accordance with the other TWPs: it was agreed to propose relevant amendments in section 4 with regard to atypical expression. With regard to document TGP/8/1 Part I Section 2 "Trial Design", it was agreed to propose that it should cover the possibility of having separate trials to examine plants at different stages of development, e.g. young trees and mature trees. However, the TWF agreed that it would be more appropriate to have a detailed discussion on TGP/8 at its thirty-ninth session, in 2008, when the document would be more advanced. For TGP/8, Part II: Techniques used in DUS Examination, Section 6 "Examining DUS in bulk samples", the TWF agreed to propose that it should provide guidance for the examination of characteristics using bulk samples in crops observed for only one growing cycle. For TGP/11/1 Draft 2 "Examination of Stability", it was agreed that the document should be

revised to differentiate between issues of stability and uniformity and address only those issues which concerned stability. As well as other changes in accordance with the other TWPs, TGP/12/1 Draft 2 “Special Characteristics” was considered and for document TGP/13/1 Draft 9 “Guidance for New Types and Species”, the TWF proposed changes in accordance with observations by the other TWPs. For document TGP/14/1 Draft 3 Section 2 “Botanical Terms: Subsection 2 “Shapes and Structures”, it was agreed that the approach of the Technical Working Party for Vegetables (TWV) represented a good balance between the need for precise and consistent observations and the need for shape to be presented in a practical way for the purposes of description. The TWF agreed that that approach for shape should be used for drafting Test Guidelines for at least those drafts to be considered for the first time at its thirty-ninth session. The TWF discussed TGP/14/1 Draft 3 Section 2 “Botanical Terms: Subsection 3 “Color” and noted that the Technical Working Party for Ornamental Plants and Forest Trees (TWO) had agreed that it would be difficult to make progress on those matters within the TWO session in a timely and effective way and supported the TWO proposal to hold a separate meeting to discuss the development of the document. The TWF supported the TWO proposal that the adoption of TGP/14 should not be delayed by awaiting the adoption of TGP/8.

107. The TWF discussed TGP/5 “Experience and Cooperation in DUS Testing” and proposed clarification of the terms “breeder”, “applicant” and “original breeder” in document TGP/5: the TWF noted that this would imply a significant change to the way in which those terms were used by many members of the Union and proposed to avoid introducing a new term such as “original breeder” by using the phrase “the person who bred, or discovered and developed, the variety”. The TWF also made observations and suggestions on other sections of the document. The TWF noted the information provided in documents TWF/38/4 “UPOV Information Databases, TWF/38/5 “Variety Denominations” and TWF/38/6 “Project to Consider the Publication of Variety Descriptions”. With regard to document TWF/38/7 “Practical Guide for Drafters of UPOV Test Guidelines” and TGP/7 “Assistance in the Development of Authorities’ Guidelines”, Mr. Erik Schulte (Germany) agreed to be included in the list willing to provide guidance in the development of guidelines. The TWF discussed document TWF/38/8 “Combinations of Lines”.

108. The TWF agreed to propose Mrs. Bronislava Bátorová (Slovakia) as the next chairperson of the TWF.

109. The TWF agreed for submission to the TC the draft revised Test Guidelines for Black Currant, Grapevine and Strawberry and also the new draft Test Guidelines for Coffee, Hawthorn and Common Sea Buckthorn.

110. The TWF planned to continue discussions on Test Guidelines for a total of 13 species: 2 revisions and 11 new, 5 of which were at “final” draft stage. It also decided to consider discussing draft Test Guidelines for *Actinidia* (Revision), Chinese chestnut, Chinese date, *Juglans mandshurica* and *Prunus mume* at its fortieth session.

111. At the invitation of Portugal, the TWF agreed to hold its thirty-ninth session in Lisbon, Portugal from June 2 to 6, 2008, with a preparatory workshop on June 1. During the thirty-eighth session, the TWF planned to discuss or re-discuss the following items: short reports on developments in plant variety protection from members and observers; as well as within UPOV; Developments on molecular techniques; TGP documents; UPOV information databases; Development of a set of example varieties for North East Asia for the Test Guidelines of Strawberry; Discussions and Recommendations on draft Test Guidelines.

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

112. The TWO held its fortieth session in Kunming, China, from July 2 to July 6, 2007, with Mrs. Sandy Marshall (Canada) as chairperson. The TWO was welcomed by Mr. Li Dongsheng, President, Office of the Protection of New Varieties of Plants, State Forestry Administration, and Mr. Li Gang, Deputy President, Yunnan Flower Association. The report of the session is presented in document TWO/40/10.

113. The meeting was attended by 104 participants from 18 members of the Union, one observer State and one observer organization. The TWO noted that the preparatory workshop, held during the afternoon of July 1, prior to the TWO meeting, was attended by 78 participants from 6 members of the Union and one observer organization.

114. Two presentations on the plant breeders' rights system in China were made to the TWO, by Mr. Zhou Jianren, Division Director, Office of the Protection of new Varieties of Plants, State Forestry Administration and by Ms. Sun Junli, Department of Science, Technology and Education, Ministry of Agriculture. The TWO also received short oral reports on developments in variety protection from participants and from the Office of the Union on the latest developments within UPOV.

115. The TWO considered document TWO/40/2 concerning the Use of Molecular Techniques in DUS Testing and received an oral report from Mr. Joost Barendrecht, Chairman of the *Ad hoc* Crop Subgroup on Molecular Techniques for Rose (Crop Subgroup for Rose). It was noted that the Crop Subgroup for Rose had met in Angers, France, on April 18, 2007.

116. A number of draft TGP documents were discussed. The TWO had particular interest in TGP/10/1 Draft 7, section 4, which deals with the determination of uniformity based on off-types. In discussing TGP/8/1 Draft 7, the TWO proposed that Part I, section 2 "Trial Design" should cover the possibility of having separate trials to examine plants at different stages of development, such as young trees and mature trees. It was agreed that it would be appropriate to have a detailed discussion at its session in 2008, when TGP/8 would be more advanced. The TWO discussed TGP/11, "Examination of Stability", and agreed that the document should continue to be developed but that it should be revised to differentiate between issues of stability and uniformity, addressing only those which concerned stability. In discussions concerning TGP/12 Draft 2 "Special Characteristics", the TWO proposed that consideration be given to frost tolerance. The TWO also discussed and made recommendations on TGP/13 Draft 9 "Guidance for New Types and Species" and TGP/14 Draft 3 "Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents". Regarding TGP/14, Section 2, Subsection 3 "Color", the TWO noted that discussions on draft Test Guidelines had identified several important issues which needed to be resolved, and proposed that a separate meeting on development of color characteristics be organized to take place immediately before the 2008 sessions of the TWF and TWO. The TWO also considered and commented on the revision of TGP/5 "Experience and Cooperation in DUS Testing".

117. The TWO considered TWO/40/4, concerning UPOV Information Databases and requested the Office of the Union to investigate if the Germplasm Resources Information Network (GRIN) would be willing to provide advice to UPOV members on botanical classification of varieties under examination. The TWO also noted the importance of raising awareness of the existence of the Plant Variety Database in order to increase its use by breeders.

118. The TWO noted the developments provided in the documents TWO/40/5 “Variety Denominations” and TWO/40/6 “Project to Consider Publication of Variety Descriptions”. The TWO considered document TWO/40/8 “Combination of Lines” in its discussions on document TGP/10.

119. In discussing document TWO/40/7, “Practical Guide for Drafters of UPOV Test Guidelines”, the TWO noted that the representative of the International Community of Breeders of Asexually Reproduced Ornamental and Fruit Varieties (CIOPORA) would consult within CIOPORA to determine if it would be helpful for breeders to be included in the subgroup of interested experts for the drafting of specific Test Guidelines of interest. That would facilitate the involvement of breeders in the drafting of Test Guidelines, giving them the opportunity to comment on interim drafts, rather than just the final version.

120. In addition, the TWO agreed that it would be useful to consider developing a more detailed section within TGP/7 for guidance on the development of national guidelines, in cases where there are no UPOV Test Guidelines. It was proposed to include a list of experts who would be willing to provide assistance to authorities in the development of such guidelines. Four experts from the TWO agreed to the inclusion of their names on this list.

121. The TWO agreed to submit seven Test Guidelines to the TC. Of these, three were revisions of existing guidelines for Kalanchoe, Osteospermum, and Poinsettia; and four were new Test Guidelines for Hawthorn, Nemesia, Portulaca and Tea. At the forty-first session in 2008, the TWO plans to discuss 26 Test Guidelines, comprising six revisions and 20 new Test Guidelines.

122. At the invitation of the Netherlands, the TWO agreed to hold its forty-first session in Wageningen, Netherlands, from June 9 to 13, 2008, with the preparatory workshop to be held on June 8. It was agreed that this preparatory workshop should be extended to an entire day and should be aimed at encouraging the participation of breeders wishing to contribute to the development of Test Guidelines. During the forty-first session the TWO planned to discuss or re-discuss the following items: short reports on developments in plant variety protection from members, observers and within UPOV; molecular techniques; the project to consider the publication of variety descriptions; UPOV information databases; TGP documents and discussion of and recommendations for draft test guidelines.

123. The TWO agreed to propose Mrs. Andrea Menne (Germany) as the next TWO chairperson.

#### Technical Working Party for Vegetables (TWV)

124. The TWV held its forty-first session in Nairobi, Kenya, from June 11 to 15, with a preparatory workshop held on June 10. The Chairperson was Niall Green (United Kingdom). The report of the session is available in document TWV/41/13. The session was attended by 42 participants from 18 members of the Union, two observer organizations and the Office of the Union. The preparatory workshop was attended by 20 participants.

125. The TWV received oral reports from the participants on developments in plant variety protection (PVP) in their countries. In particular, the TWV received a presentation on Plant Variety Protection in Kenya which included information on National Listing and seed certification.

126. During the session, draft of documents TGP/10 “Examining Uniformity”, TGP/11 “Examination of Stability”, TGP/12 “Special Characteristics”, TGP/13 “Guidance for New Types and Species” and TGP/14 “Glossary of Technical, Botanical and Statistical Terms used in UPOV Documents”, were discussed. In addition, the revision of TGP/5 “Experience and Cooperation in DUS Testing”, was also discussed.

127. The TWV considered reports on the current use of molecular techniques for vegetable crops, presented by experts from the European Community, France, the Netherlands, Spain and the International Seed Federation (ISF). Molecular markers were being used in a range of crops to research the potential for examining disease resistance, identity, uniformity, stability, essentially derived varieties and to verify the correspondence between DUS and Value for Cultivation and Use (VCU) samples. The Community Plant Variety Office of the European Community (CPVO) reported that results from a two-year project between six partners, to evaluate the use of molecular markers linked to disease resistance genes in Tomato (BMT option 1(a)), would be presented to the BMT meeting in Spain and to the forty-second session of the TWV in 2008.

128. Further discussions were held on the project to consider the publication of variety descriptions. The TWV considered a report from the CPVO on the use of grouping and other characteristics for Tomato in a regional approach, and agreed to review the allocation of grouping, Technical Questionnaire and asterisked characteristics when the Test Guidelines are considered for revision at its forty-second session in 2008.

129. The TWV discussed the results of an exercise to compare overall shape and components of shape in Onion and *Cucurbita maxima*. The TWV concluded that, although the individual components of shape were recorded more consistently and were more useful for discriminating varieties, the overall shape was useful for variety description purposes. The results from the exercise also revealed that the shape of two varieties of *Cucurbita maxima* were not adequately described and it was agreed to conduct a partial revision of the Test Guidelines in 2008.

130. The TWV proposed that consideration could be given to the addition of a field in the UPOV-ROM Variety Database to indicate the dates at which a variety was commercialized for the first time in the territory of application and other territories, as provided in the UPOV Model Form for the Application of Plant Breeders’ Rights in document TGP/5.

131. The TWV agreed to submit four revised Test Guidelines (Beetroot, Chamomile, Leek, and Onion and Shallot) and two new Test Guidelines (Cultivated Rocket and Wild Rocket) for consideration by the TC.

132. The TWV agreed to discuss a total of 17 Test Guidelines at its forty-second session, of which 12 were final drafts. Nine were new Test Guidelines, six were revisions and two were partial revisions (Swede and Tomato). The TWV agreed to extend the coverage of the Test Guidelines for Globe Artichoke to include Cardoon.

133. The TWV agreed to propose Mrs. Radmila Safarikova (Czech Republic) as the next chairperson of the TWV.

134. At the invitation of the expert from Poland, the TWV agreed to hold its forty-second session in Cracow, Poland from the June 23 to 27, 2008, with a preparatory workshop on June 22.

135. During its forty-second session, the TWV planned to discuss: short reports on developments in plant variety protection, molecular techniques, TGP documents, UPOV information databases, the project to consider the publication of variety descriptions, applications for varieties with low germination, draft Test Guidelines, the date and place of the next session, the future program and the report on the conclusions of the session.

Ad hoc Crop Subgroup on Molecular Techniques Maize (Crop Subgroup for Maize)

136. The *Ad Hoc* Crop Subgroup on Molecular Techniques for Maize (Crop Subgroup for Maize) held its second session in Chicago, United States of America, on December 3, 2007, under the chairmanship of Mrs. Beate Rücker (Germany). The report of the session is presented in document BMT-TWA/Maize/2/12.

137. The session was attended by 36 participants from seven members of the Union and three observer organizations.

138. The Crop Subgroup for Maize discussed the possible use of molecular markers for the examination of DUS. It noted that breeders had concerns about any move from the present system, based on morphological characteristics, to a system which includes molecular markers. It was noted that it would be important to take into account the impact of the use of molecular markers on the level of protection. The Crop Subgroup for Maize agreed that more information would be needed to be able to overcome those concerns.

139. The Crop Subgroup for Maize agreed to propose that the TWA, the TC and the CAJ discuss the acceptability of the approach presented in documents BMT/10/14 and BMT-TWA/Maize/2/11 and suggested that the approach might be put forward for consideration at the BMT Review Group as a potential option for the use of molecular markers in DUS examination. It noted that a possible timetable for that process could be for the TWA, TC and CAJ to consider the proposal at their respective sessions in 2008, with a view to convening a possible meeting of the BMT Review Group in April 2009.

140. The Crop Subgroup for Maize noted the successful development of Single Nucleotide Polymorphisms (SNP) markers in maize. That type of molecular marker would have substantial advantages compared to microsatellite (simple sequence repeat (SSR)) markers, in particular in relation to robustness, stability and cost.

141. The Crop Subgroup for Maize observed that there had been substantial work on variety identification by breeders and research centers and noted that molecular markers were already being used by breeders in relation to possible cases of infringement.

142. The Crop Subgroup for Maize noted the substantial progress which had been made within ISF on the matter of essentially derived varieties (EDVs) and welcomed the opportunity which the Crop Subgroup for Maize had provided, by means of good breeder participation, to receive a comprehensive explanation of the developments which had taken place.

143. The Crop Subgroup for Maize agreed that its next session might take place in late 2009, tentatively in conjunction with the maize and sorghum breeders' meeting in the United States of America. It anticipated that such a timetable would allow for the collection of further substantial data in relation to the approach presented in documents BMT/10/14 and

BMT-TWA/Maize/2/11 and would also allow a report on the views of the TWA, TC, CAJ and BMT Review Group on that approach.

*Ad hoc* Crop Subgroup on Molecular Techniques Potato (Crop Subgroup for Potato)

144. The *Ad Hoc* Crop Subgroup on Molecular Techniques for Potato (Crop Subgroup for Potato) held its second session in Quimper, France, on April 17, 2007, under the chairmanship of Mrs. Beate Rücker (Germany). The report of the session is contained in document BMT-TWA/Potato/2/7.

145. The session was attended by 27 participants from 11 members of the Union, and one observer organization.

146. The Crop Subgroup for Potato considered presentations by experts from the United Kingdom and France on the possible use of molecular markers in the examination of distinctness, uniformity and stability and in variety identification. It was noted that there was no work by the international breeders' organizations in developing essentially derived variety thresholds for potato.

147. The Crop Subgroup for Potato agreed the following conclusions in relation to the possible use of molecular information in relation to DUS examination:

(a) molecular information alone should not be used for the assessment of distinctness, but might be considered in combination with morphological information in relation to the management of reference collections;

(b) the use of molecular markers could improve the management of reference collections used for DUS examination, in particular in relation to improving the coverage of the reference collections; and

(c) the creation of a database containing both molecular and phenotypic data would be a necessary step for the use of molecular data in the management of reference collections. In that respect, it was also noted that there was still a need for work to be done on the harmonization of descriptions of morphological characteristics in order to be able to use such data from different sources. The next step should include an assessment of the way in which the molecular and the phenotypic data might be used. There was recognition of the need for expertise in both morphological and molecular aspects.

148. With respect to variety identification, it was noted that molecular data were already being used successfully, but the level of molecular information for identification could be different depending on the specific situation.

149. The Crop Subgroup for Potato agreed that it would be useful for the experts working on the Community Plant Variety Office of the European Community (CPVO) project and at the French Federation of Potato Seed Growers (FNPPPT) to cooperate in order to investigate the compatibility of data obtained using different technologies.

150. It was agreed that the Crop Subgroup for Potato should continue its work. The date for a next meeting depends on the availability of new information and was not fixed.



Ad hoc Crop Subgroup on Molecular Techniques Rose (Crop Subgroup for Rose)

151. The *Ad Hoc* Subgroup on Molecular Techniques for Rose (Crop Subgroup for Rose) held its second session in Angers, France, on April 18, 2007, under the chairmanship of Mr. Joost Barendrecht (Netherlands). The report of the session is presented in document BMT-TWO/Rose/2/6.

152. The meeting was attended by 19 participants from 8 members of the Union and by 2 participants from 2 observer organizations.

153. Following the opening of the meeting and the adoption of the agenda, the Office of the Union provided a presentation on developments in UPOV concerning biochemical and molecular techniques.

154. With regard to the Breeders' Day, to be organized within the eleventh session of the BMT, to be held in Madrid, from September 16 to 18, 2008, the representative of the International Seed Federation (ISF) confirmed that ISF is in favor of the Breeders' Day in order to provide a forum to demonstrate the use of molecular techniques in relation to variety identification and essentially derived varieties.

155. Mrs. Beate Rücker (Germany), Chairperson of the *Ad hoc* Subgroup on Molecular Techniques for Potato (Crop Subgroup for Potato) made a brief report on the second session of that subgroup. The Crop Subgroup for Potato concluded that molecular markers as proposed by France for maize might be useful for the management of reference collections in other crops. For variety identification, the use of molecular markers was seen as a supplementary tool for authenticity checks.

156. Discussions took place on three questions raised by the Chairman: the technical applicability for rose of the approaches as introduced in the presentations; the usefulness of that approach for rose; and the implications for the overall costs of testing in rose.

157. In relation to the topics "Molecular Techniques in the Examination of Distinctness Uniformity and Stability", "Molecular Techniques in variety identification" and "Molecular Techniques in the Assessment of Essential derivation", three presentations were given: by France as a tool in the management of reference collections using Maize as an example; by China in a presentation in which molecular techniques were explained as a useful tool to distinguish rose and tree varieties that have similar traits such as colors and leaf shapes; and by the United Kingdom in a presentation of a study of potatoes using microsatellites for variety identification.

158. A presentation by the Community Plant Variety Office of the European Community (CPVO) was given on a meeting with professional organizations, rose breeders and CPVO experts on a rose R&D project that had been held the previous day at the CPVO.

159. As far as the remarks and comments to the various presentations are concerned the following conclusions could be drawn:

(a) there is no support for using molecular techniques as the only tool for testing distinctness;

(b) in the management of reference collections, a system as described by France, is technically feasible;

(c) however, the experts with experience in rose present at the meeting are not really unhappy with the current tools for the management of reference collections in Rose;

(d) there is support for using molecular techniques for identification and for solving problems of essential derivation; and

(e) in relation to point (d) to store DNA samples as a matter of routine and to attach fingerprints to the official variety description.

160. The Crop Subgroup for Rose agreed on the importance of considering the following matters at UPOV level:

(a) whether it would be useful for authorities to attach a DNA fingerprint to the official variety description;

(b) for which crops DNA-fingerprints attached to the official variety description might be of most interest and why; and

(c) whether it would be useful for authorities to conserve DNA samples.

161. The Crop Subgroup for Rose agreed to hold its third session in conjunction with the eleventh session of the BMT, which will be held in Madrid, from September 16 to 18, 2008.

*162. The Council is invited:*

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

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

[End of document]