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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*

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).

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

1. The Technical Committee (TC) held its forty-first session in Geneva from April 4 to 6, 2005 under the chairmanship of Ms. Julia Borys (Poland).

### Participation

2. The meeting was attended by 97 participants from 45 members of the Union, one observer State and six 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

3. The Vice Secretary-General provided an oral report on the forty-ninth and fiftieth sessions of the Administrative and Legal Committee (CAJ), the sixty-seventh and the sixty-eighth sessions of the Consultative Committee and the twenty-first extraordinary session and the thirty-eighth 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

4. 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) and the Technical Working Party for Vegetables (TWV). It noted that the BMT had not met since the fortieth session of the TC.

5. The TC also received oral reports from the Chairpersons of the respective *Ad hoc* Crop Subgroups on Molecular Techniques (Crop Subgroups) for Potato and Sugarcane. In the absence of the Chairman for the Crop Subgroup for Wheat, a report was made by the Chairman of the TWA.

### Matters Arising from the Technical Working Parties

6. The TC considered document TC/41/3.

7. The TC noted that the terms of office for the Chairpersons of the Technical Working Parties (TWPs) and the BMT would expire with the ordinary session of the Council in 2005. As suggested by the TWPs, the TC proposed to the Council that it elect, at its thirty-ninth session to be held on October 27, 2005, as Chairpersons for the term from 2006 to 2008:

TWA: Mrs. Beate Rücker (Germany)  
TWC: Mrs. Sally Watson (United Kingdom)  
TWF: Mr. Alejandro Barrientos Priego (Mexico)  
TWO: Ms. Sandy Marshall (Canada)  
TWV: Mr. Niall Green (United Kingdom)

8. At the proposal of the Delegation of France, the TC agreed to propose to the Council that it elect Mr. Henk Bonthuis (Netherlands) as Chairman of the BMT for the term from 2006 to 2008.

#### TGP Documents

9. The TC discussed the development of the TGP documents on the basis of document TC/41/5.

#### *TGP documents for approval*

10. The TC noted that adopted TGP documents would be published in a special section within the freely accessible part of the UPOV website. It also heard that document TGP/7/1 “Development of Test Guidelines” would now be placed in that section.

11. The TC approved documents TGP/0/1 “List of TGP Documents and Latest Issue Dates” and TGP/2/1 “List of Test Guidelines Adopted by UPOV”.

12. With regard to document TGP/3/1 Draft 2 “Varieties of Common Knowledge”, the TC noted that, whilst that document had been adopted by the Council, the Enlarged Editorial Committee (TC-EDC) had wondered whether the document went beyond what was contained in the General Introduction, in terms of practical clarification in relation to varieties of common knowledge. The TC agreed that it would be better to try to elaborate a more practical and comprehensive document in respect of varieties of common knowledge in conjunction with the CAJ.

13. The TC noted that sections 1 to 7 of TGP/5 “Experience and Cooperation in DUS Testing” represented texts which were contained in the UPOV publication 644(E) “Important Texts and Documents”. It observed that some of those texts had been adopted several years ago and would benefit from updating. However, it recognized that those texts represented the adopted UPOV position and also noted that UPOV publication 644(E) was no longer available and that many new members of the Union did not have easy access to those texts. Therefore, it approved sections 1 to 7 but, in addition, agreed to develop a program for updating of those sections, based on priority, in conjunction with the CAJ and Council, as appropriate. The Office of the Union (the Office) agreed to prepare a proposal for consideration by the TC at its forty-second session.

14. The TC approved document TGP/5 on the basis of certain amendments to Section 10/1 Draft 2 and on the basis that the status of additional characteristics would be made clear on the UPOV website and that there would be a review of the notification of additional characteristics on the UPOV website after three years of operation.

15. The TC agreed to the adoption of TGP/6 “Arrangements for DUS Testing” on the basis of document TGP/6 Sections 1-3 Draft 2, subject to improvements to the translations in the

French, German and Spanish versions, to be notified to the Office by the members of the Editorial Committee.

16. The TC agreed that TGP/12 Section 2 “Chemical Constituents: Protein Electrophoresis” should not yet be adopted and should be brought forward for adoption in conjunction with the other sections of TGP/12 in due course.

*TGP documents for discussion only*

17. The TC agreed the text of document TGP/4/1 Draft 3 “[Constitution and] Management of Variety Collections”, subject to certain amendments and agreed that document TGP/4/1 Draft 3, as amended, should be circulated to the TWPs at their sessions in 2005 on the basis that it represented the agreed situation in the TC.

18. The TC agreed amendments to document TGP/9/1 Draft 3 “Examining Distinctness”.

*TGP/7 “Development of Test Guidelines”*

19. The TC agreed that, where proposals to update document TGP/7/1 “Development of Test Guidelines” were agreed by the TC, document TGP/7/1 should be revised and a new version adopted (TGP/7/2 in the first instance). Such revisions would also be reflected in the electronic template and drafters’ kit.

*Program for the development of TGP documents*

20. The TC approved the program for the development of TGP documents, as set out in the Annex to document TC/41/5, with the amendment that TGP/12 Section 2 “Chemical Constituents: Protein Electrophoresis” should be adopted in conjunction with the other sections of TGP/12 and the need to develop a new draft of TGP/3 “Varieties of Common Knowledge”.

UPOV Information Databases

21. The TC received a demonstration of the GENIE database from Mr. Carl Phillips, IT expert of the World Intellectual Property Organization (WIPO), responsible for the development of the software. The Office then introduced document TC/41/6.

*UPOV Code System*

22. The TC noted that the relevant TWPs would be invited to check amendments to the codes in GENIE, as set out in Annex II to document TC/41/6. The TC noted that the Office planned to develop some guiding criteria for identifying the most appropriate authorities to check UPOV code entries and heard that this was likely to include consideration of whether the authority had granted protection to varieties and whether it had practical DUS testing experience of the genera or species concerned.

23. The TC heard from the Office that the GENIE database made provision for information to be attributed in relation to different types of variety (e.g. rootstock varieties, ornamental varieties, etc.) within the same UPOV code, as set out in document TC/41/6, paragraph 13.

24. The TC approved the proposals for UPOV codes in relation to intergeneric and interspecific hybrids, as set out in document TC/41/6, paragraphs 7 to 10, and the proposals for UPOV codes on the basis of groups within *Beta vulgaris* and part of *Brassica oleracea*, as set out in document TC/41/6, paragraph 12.

25. The TC agreed that the UPOV codes, together with their relevant botanical and common names, variety denomination class and linked hybrid/parent UPOV codes, as contained in the GENIE database, should be published on the first restricted area of the UPOV website. The information would be published in such a way as to facilitate electronic downloading of the information for use by contributors to the UPOV-ROM.

26. The TC heard that the Community Plant Variety Office (CPVO) was developing a tool for the automation of UPOV code allocation and had agreed to share that tool with the Office and members of the Union.

27. With regard to assistance which might be required in order to introduce UPOV codes when submitting data for the UPOV-ROM, the Office agreed to explain to members of the Union and other contributors the way in which the UPOV code would be made available and how to incorporate it into their data.

#### *GENIE*

28. The TC heard that the advanced prototype GENIE in Microsoft Access format had been populated with all available UPOV codes and corresponding information relating to: Status of protection (see document C/38/6); Cooperation in examination (see document C/38/5); Experience in DUS testing (see document TC/41/4); and UPOV Test Guidelines (see document TC/41/2). The TC noted that the advanced prototype GENIE, as demonstrated, would be evaluated within the Office for its suitability for responding to requests for information received in the Office, before a commitment was made to the design of the web-based version.

29. The Office confirmed that the GENIE database could be expanded to include other languages, in addition to the UPOV languages. However, it explained that it could not make any commitment with regard to the resources which would be necessary for such a development.

#### *Plant Variety Database*

30. The TC noted that, with regard to the program to improve the Plant Variety Database, priority was focussed on improvements which could equally be realized in both the UPOV-ROM and web-based formats, namely:

(a) introduction of the UPOV code;

(b) improving the ease of contributing data to the UPOV-ROM through the development of a data submission table allowing data to be provided without the use of TAG format. The Office explained that, as a part of its cooperation with CPVO, it planned to base its table on the table developed by the CPVO for the submission of data to the CPVO centralized database on variety denominations;

(c) providing training in the use of the UPOV-ROM: Information on the use of the UPOV-ROM and how to contribute data is included in the Workshop on Data Handling, which is occasionally organized in conjunction with the TWC sessions.

31. The TC was informed that the schedule for the development of an initial prototype of the web-based Plant Variety Database would depend on the resources needed to advance the three priorities set out above. In particular, the TC noted that the level of assistance needed for contributors in relation to the introduction of the UPOV code would determine how quickly it would be possible to start working on the web-based Plant Variety Database. The prototype web-based Plant Variety Database, once developed, would be presented with proposals concerning the fields to be included and proposals for which fields might be considered to be mandatory, as requested by the TC at its fortieth session. The frequency of updating of the web-based Plant Variety Database would be considered in conjunction with the presentation of the prototype together with consideration of the establishment of links to relevant websites for variety denomination checking purposes. The TC heard that the Office would investigate the potential for the development of a common searching platform to be provided for certain databases relevant for variety denomination searching purposes.

#### Molecular Techniques

32. The TC considered document TC/41/7 “Molecular Techniques”.

#### *Situation in UPOV concerning the possible use of molecular markers in DUS examination*

33. The TC agreed that the text of the Annex to document TC/40/9 Add. “Situation in UPOV Concerning the Possible Use of Molecular Markers in DUS Examination” should not be amended.

#### *BMT Guidelines*

34. The TC noted that a new draft of the Guidelines for Molecular Marker Selection and Database Construction (BMT Guidelines) would be presented to the ninth session of the BMT, to be held in Washington, D.C., United States of America, from June 21 to 23, 2005, and to the twenty-third session of the TWC to be held in Ottawa, Canada, from June 13 to 16, 2005. It agreed that, on the basis of the comments received at the BMT and TWC sessions, a new draft would be prepared for consideration by the TC-EDC and by the forty-second session of the TC in April 2006.

#### *Molecular tools for variety identification*

35. The TC agreed that, in document TC/41/7, paragraphs 9 to 11, the term “variety characterization” should be amended to read “variety identification”.

#### *Crop Subgroups*

36. The TC received oral reports on the Crop Subgroups for: Potato, from the Chairperson, Ms. Beate Rücker (Germany); Sugarcane, from the Chairperson, Mr. Luis Salaices (Spain); and Wheat, from Luis Salaices, on behalf of the proposed Chairperson, Mr. Robert Cooke (United Kingdom). There had been no meetings of the Crop Subgroups for: Maize; Oilseed Rape; Rose; Soybean; Tomato; nor Mushroom.



37. In accordance with the proposal of the TWA, the TC agreed that Mr. Robert Cooke (United Kingdom) should be Chairman of the Crop Subgroup for Wheat.

38. The TC noted the report of the TWA that laboratories in Denmark and the United Kingdom were working on molecular tools in ryegrass. The TC observed that ryegrass, being a cross-pollinated species, would pose particular difficulties, but noted the need for tools to help in the management of reference collections and the potential for an Option 2 approach. On that basis, it approved the establishment of a crop subgroup for ryegrass, with Mr. Michael Camlin (United Kingdom) as Chairman.

39. The TC agreed that the following Crop Subgroups should meet, subject to the availability of sufficient papers for discussion, at a date and location to be proposed to the TC by the relevant TWP, or at a date and location agreed jointly between the Chairpersons of the TC, the relevant TWP, the relevant Crop Subgroup and the Office:

<i>Crop Subgroup for:</i>	<i>Chairperson</i>	<i>TWP</i>
Maize	Mrs. Beate Rücker (Germany)	TWA
Oilseed Rape	Mrs. Françoise Blouet (France)	TWA
Potato	Mrs. Beate Rücker (Germany)	TWA
Rose	Mr. Joost Barendrecht (Netherlands)	TWO
Ryegrass	Mr. Michael Camlin (United Kingdom)	TWA
Soybean	Mr. Marcelo Labarta (Argentina)	TWA
Sugarcane	Mr. Luis Salaices (Spain)	TWA
Tomato	Mr. Richard Brand (France)	TWV
Wheat	Mr. Robert Cooke (United Kingdom)	TWA

40. The TC agreed that the following Crop Subgroup should be discontinued:

<i>Crop Subgroup for:</i>	<i>Chairperson</i>	<i>TWP</i>
Mushroom	Mr. Nico van Marrewijk (Netherlands)	TWV

41. The TC noted that the Chairman of the TWC, the Chairman of the BMT and the Office had considered the content for the agenda of the sessions of the TWC and BMT in 2005 to take most advantage of the fact that those sessions would be held back-to-back in Canada and the United States of America. The TC noted that, in particular, the BMT Guidelines would be discussed at both sessions.

### Variety Denominations

42. Document TC/41/8 “Variety Denominations” was introduced by the Office.

43. The TC considered the proposals by the Working Group on Variety Denominations (WG-VD) and the Chairman of the TWF concerning variety denomination classes as set out

in Annex II to document TC/41/8. The TC agreed the matters to be considered by the TWPs and agreed that the comments of the TWPs should be reported to the CAJ for consideration at its fifty-second session.

### Publication of Variety Descriptions

44. The TC noted the information provided in document TC/41/9 “Publication of Variety Descriptions”.

### Preparatory Workshops

45. The TC noted the report of the preparatory workshops held in 2004 and agreed the proposed program for 2005, as set out in document TC/41/10.

46. The Table below summarizes the participation in the preparatory workshops during 2004.

	Number of Participants			Comprising (2004)
	2002	2003	2004	
Members of the Union	35 (15 countries)	55 (23 countries)	69 (20 countries)	Australia, Austria, Brazil, Canada, Czech Republic, Germany, Hungary, Japan, Kenya, Mexico, Netherlands, New Zealand, Poland, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Spain, Ukraine
Observer States / Authorities	1	10 (9 States / Authorities)	2 (1 State)	Albania
Observer Organizations	8	3	2	International Seed Federation (ISF), International Tropical Fruits Network (TFNet)

47. With regard to participation at individual preparatory workshops, the numbers of participants were as follows:

TWA (Poland):	45 participants
TWC (Japan):	5 ”
TWF (Germany):	7 ”
TWO (Germany):	11 ”
TWV (Republic of Korea):	6 ”
BMT:	no meeting

Test Guidelines

48. The TC adopted the Test Guidelines listed in the Table below on the basis of the amendments specified in document TC/41/11 and the linguistic changes recommended by the TC-EDC:

Document No.	English	Français	Deutsch	Español	Botanical name
TG/6/5(proj.4)	Lucerne	Luzerne	Luzerne	Alfalfa	<i>Medicago sativa</i> L., <i>M. x varia</i> Martyn
TG/12/9(proj.2)	French Bean	Haricot	Gartenbohne	Judía común, Alubia	<i>Phaseolus vulgaris</i> L.
TG/14/9(proj.5)	Apple (fruit varieties)	Pommier (var. fruitières)	Apfel (Fruchtsorten)	Manzano (var. frutales)	<i>Malus</i> Mill.
TG/70/4(proj.5)	Apricot	Abricotier	Aprikose, Marille	Albaricoquero, Damasco	<i>Prunus armeniaca</i> L., <i>Armeniaca vulgaris</i> Lam.
TG/136/5(proj.3)	Parsley	Persil	Petersilie	Perejil	<i>Petroselinum crispum</i> (Mill.) Nyman ex A.W. Hill
TG/143/4(proj.2)	Chick-Pea	Pois chiche	Kichererbse	Garbanzo	<i>Cicer arietinum</i> L.
TG/172/4(proj.2)	Industrial Chicory	Chicorée industrielle	Wurzelzichorie	Achicoria	<i>Cichorium intybus</i> L. partim
TG/186/1(proj.2)	Sugarcane	Canne à sucre	Zuckerrohr	Caña de azúcar	<i>Saccharum</i> L.
TG/ANTIR(proj.3)	Antirrhinum	Antirrhinum	Antirrhinum	Antirrhinum	<i>Antirrhinum majus</i> L.
TG/ARGYR(proj.4)	Argyranthemum	Anthemis	Strauchmargerite	Argyranthemum	<i>Argyranthemum frutescens</i> (L.) Sch. Bip.
TG/BRACHY(proj.4)	Brachyscome	Brachyscome	Blaues Gänseblümchen, Brachyscome	Brachyscome	<i>Brachyscome</i> Cass.
TG/GINSENG(proj.4)	Ginseng	Ginseng	Ginseng	Ginseng	<i>Panax ginseng</i> C.A. Meyer
TG/WAXFL(proj.4)	Waxflower	Chamelaucium	Chamelaucium	Chamelaucium	<i>Chamelaucium</i> Desf.

49. In adopting the Test Guidelines for Sugarcane on the basis of document TG/186/1(proj.2), the TC noted that the Test Guidelines had been originally adopted in 2002, pending the provision of information from the Leading Expert and were, therefore, not fully in accordance with document TGP/7/1 “Development of Test Guidelines”.

50. The TC-EDC reported that there were technical issues to be resolved with the Test Guidelines for Capsicum annuum L., document TG/76/8(proj.2), which it had not been possible to resolve, and recommended that the TC refer the Test Guidelines back to the TWV. The TC agreed with that recommendation.

51. The TC agreed to the plans for the development of new Test Guidelines and the revision of existing ones, as shown in Annex II to document TC/41/2.

52. The TC noted the status of the existing Test Guidelines as listed in document TC/41/2, Annex III.

53. The TC approved the proposal of the Office to place Word versions of adopted Test Guidelines on the first restricted area of the UPOV website.

#### List of Species in Which Practical Knowledge has Been Acquired or for Which National Test Guidelines Have Been Established

54. The TC considered document TC/41/4.

55. The TC noted that, for the purpose of checking their information for the preparation of document TC/41/4, each authority had been provided with an extract from GENIE concerning exclusively their own data, rather than the complete document TC/40/4. This had enabled authorities to check their data more comprehensively and had resulted in a stronger response to update information than in previous years. It noted that the document contained data provided from the CPVO for the first time. The Office agreed to investigate if a more suitable two letter code might be used for CPVO in future.

56. The TC agreed to the deletion of the notes indicating the type of experience and to simply indicate whether an authority had experience in DUS testing. It noted that this would make the maintenance of the list more straightforward for authorities, thereby increasing its completeness and accuracy and would not, in practice, reduce the information provided on practical experience. It agreed that the title of the document should be amended to read “List of Genera and Species for which Authorities have Practical Experience in the Examination of Distinctness, Uniformity and Stability” and noted that references to that document in the TGP documents should be updated accordingly.

57. The TC noted that document TC/41/4 presented the information as received by the Office, but that the Office planned to cascade the received information to make the GENIE database more complete. For example, if an authority indicated experience for a genus, experience would be indicated for all species, within that genus, contained in GENIE. However, in such cases, it would be indicated that the experience was “derived” through experience at a higher level.

58. The TC agreed that the Office should produce a new list of genera and species for which each authority had experience after the removal of individual notes and the cascading of experience, as set out above, and requested that each authority check that new list.

#### Program for the Forty-Second Session

59. The following draft agenda was agreed for the forty-second session of the TC to be held in Geneva in 2006:

1. Opening of the session
2. Adoption of the agenda
3. Report on 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. Publication of variety descriptions
8. UPOV information databases
9. Molecular techniques
10. Preparatory workshops
11. Test Guidelines
12. List of genera and species for which authorities have practical experience in the examination of Distinctness, Uniformity and Stability
13. Program for the forty-third session
14. Adoption of the report on the conclusions reached in the session (if time permits)
15. 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

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

60. The Technical Working Party for Agricultural Crops (TWA) held its thirty-third session in Poznań, Poland, from June 28 to July 2, 2004, under the chairmanship of Mr. Luis Salaices (Spain). The report of the meeting is contained in document TWA/33/16. On Tuesday, June 29, the TWA received a presentation on “Plant variety testing, registration and legal protection in Poland” from Mr. Edward Gacek, Director of COBORU.

#### *Participation*

61. The meeting was attended by 69 participants from 28 members of the Union, one observer State and two observer organizations. The preparatory workshop, held during the morning of Sunday, June 27, 2004, was attended by 45 participants from 15 members of the Union.

#### *Molecular Techniques*

62. The TWA discussed developments on molecular techniques and agreed with the recommendation of the Technical Committee, that the annex to document TWA/33/2 would be a suitable summary of the current UPOV position. It did, however, propose to add a paragraph to clarify that options 1(a) and 2 might be pursued and that the current UPOV position was that approaches under option 3 had not been agreed. The TWA agreed to propose to the TC that Mr. Robert Cooke (United Kingdom) be appointed Chairman of the Crop Subgroup for Wheat. It received reports on the Potato, Sugarcane and Wheat Crop Subgroup meetings, which had met during the afternoon of June 28 and noted that document BMT Guidelines (proj.2) had been discussed by those crop subgroups and various recommendations made for its improvement. The TWA agreed that the work on molecular techniques in maize, oilseed rape, potato, soybean, sugarcane and wheat should be kept under review and future meetings considered as required. At the proposal of the expert from Denmark, the TWA agreed to propose to the TC and the BMT that a crop subgroup be established for ryegrass and proposed Mr. Michael Camlin (United Kingdom) as Chairman.

#### *TGP Documents*

63. The TWA discussed a number of draft TGP documents according to the program agreed by the TC and received a presentation from the Office on the development of the electronic TG template following the adoption of TGP/7.

#### *UPOV Information Databases*

64. The TWA discussed developments concerning UPOV information databases and heard a proposal from Mr. Kees van Ettehoven (Netherlands), Chairman of the Technical Working Party for Vegetables (TWV), concerning a recommendation from the TWV for UPOV codes for *Brassica* and *Beta*, which was agreed by the TWA.

*Project to Consider the Publication of Variety Descriptions*

65. The TWA discussed the Project to consider the publication of variety descriptions and received presentations on progress in the model study on barley from Mr. Gerhard Deneken (Denmark) and on potato from Mr. Henk Bonthuis (Netherlands). It agreed that, as a first step, the emphasis should be on how the description of varieties could be improved and the possibilities for developing regional sets of example varieties. Thereafter, as a second step, it could be useful to look at using the GAIA software to compare variety descriptions.

*Variety Denomination Classes*

66. The TWA discussed proposals concerning variety denomination classes and agreed that the *Ad hoc* Working Group on Variety Denominations (WG-VD) should be asked to reconsider the inclusion of different genera in mixtures as a basis for creating a class. However, it did agree that the possibility of inter-generic hybrids was an appropriate criteria for creating classes of multiple genera.

*Project for exchanging seed of selected varieties between interested countries*

67. The TWA considered a report of a comparison between descriptions of asterisked characteristics of rice varieties in the original testing countries and in Japan. The TWA noted progress in the development of regional sets of example varieties for the Test Guidelines for rice.

*Image Analysis*

68. The TWA received information on the use of image analysis for DUS testing in the United Kingdom.

*Test Guidelines*

69. The TWA agreed to submit to the TC the draft Test Guidelines for French Bean (Revision) and for Ginseng, both in conjunction with the TWV, and the draft Test Guidelines for Lucerne (Revision), and Sugarcane. The TWA planned to continue discussions on fourteen Test Guidelines in 2005.

*Chairmanship*

70. The TWA agreed to propose to the TC that it recommend to the Council to elect Mrs. Beate Rücker (Germany) as the next chairperson of the TWA.

*Date and Place of Next Session*

71. At the invitation of the expert from New Zealand, the TWA agreed to hold its thirty-fourth session in Christchurch, New Zealand, from October 31 to November 4, 2005.

*Program for the Next Session*

72. 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; Project to consider the publication of variety descriptions; Project for exchanging seed of selected varieties between interested countries; 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.

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

73. The Technical Working Party on Automation and Computer Programs (TWC) held its twenty-second session in Tsukuba, Japan, from June 14 to 17, 2004, under the chairmanship of Mr. Uwe Meyer (Germany). The TWC was welcomed by Mr. Sanji Takemori, Director, Seed and Seedlings Division (SSD), Ministry of Agriculture, Forestry and Fisheries (MAFF), and by Mr. Kiyohumi Kuwana, President, National Center for Seed and Seedlings (NCSS). The report of the session is provided in document TWC/22/17.

#### *Participation*

74. The meeting was attended by 21 participants from 11 members of the Union. The TWC noted that a preparatory workshop held during the afternoon of June 13, 2004, prior to the TWC meeting, was attended by new participants from Japan, Kenya, and the Republic of Korea. In the week before the TWC meeting, the UPOV Office and TWC held an extra Workshop on Data Handling in Beijing, China.

#### *Molecular Techniques*

75. The TWC discussed BMT developments and proposed assistance to molecular and crop experts in processing the large amount of data. It was planned to intensify the cooperation between the TWC and the BMT.

#### *TGP Documents*

76. The consideration of TGP documents started with a discussion of TGP/4 "Constitution and Management of Variety Collections" followed by TGP/8 "Use of Statistical Procedures in the examination of Distinctness, Uniformity and Stability", TGP/9 "Examining Distinctness" and TGP/10 "Examining Uniformity". For TGP/4 the TWC proposed to reword some parts of the document for a clearer understanding. The new drafts of parts of TGP/8, 9 and 10 were intensively discussed. The TWC agreed to produce first consolidated versions of TGP/8 and TGP/10. The TWC finally discussed TGP/14 "Statistical Terms", with an agreement to prepare a new draft for the next TWC meeting.

#### *UPOV Information Databases*

77. The TWC took note of new information about the UPOV information databases presented by the Office and discussed the importance of the UPOV code as a key for those databases.

#### *Project to Consider the Publication of Variety Descriptions*

78. The project to consider the publication of variety descriptions was discussed. A spreadsheet for data capture of variety descriptions was presented and some improvements



were discussed. The TWC clarified the possibility to use the GAIA program from France in the model study for the publication of variety descriptions but noted that further study would be needed.

#### *Statistical Procedures*

79. The TWC considered contributions concerning new developments in statistical procedures. The TWC discussed the influence of variation in the moving average procedure within Combined-Over-Year-Analysis for assessment of uniformity and agreed to seek further contributions to make further progress in the development of such procedures.

80. In addition, the TWC discussed the response to a questionnaire collecting information about standard probability levels for Combined-Over-Year-Analysis and agreed to re-check this information, noting that verification with the relevant crop experts was necessary. The TWC agreed that it was too early to incorporate those probability levels in the relevant TGP documents.

81. The TWC discussed a new document for calculation of relative tolerances in the number of off-types, instead of absolute tolerances, and agreed to develop this document in cooperation with crop experts for the next meeting.

82. A discussion of the effectiveness and usefulness of incomplete block designs in relation to randomized block designs concluded with an agreement that incomplete block design should be incorporated into TGP/8.2 "Experimental Design Practices" with equal status.

83. A new application of statistical procedures such as Chi-square and Fishers exact test for the assessment of distinctness for segregating characteristics had been discussed by the TWC in the last two meetings and it was agreed to develop the document by including more information about the alternative hypotheses of both tests.

#### *GAIA Software*

84. Participants exchanged experiences from work with the GAIA software and noted that the program was easy to install, but that loading of data was very time-consuming. The TWC suggested that the GAIA software might be loaded with standard data as examples in order to guide crop experts when using this software for the first time.

#### *Image Analysis*

85. The TWC noted new information concerning automatic measurements of Pea characteristics and image analysis in DUS Testing.

#### *Chairmanship*

86. The TWC agreed to propose to the TC that it recommend to the Council to elect Mrs. Sally Watson (United Kingdom) as the next chairperson of the TWC.

### *Date and Place of Next Session*

87. At the invitation of the Commissioner from the Plant Breeder's Rights Office, Canada, it was agreed that the next meeting of the TWC should take place in Ottawa, Canada, from June 13 to 16, 2005.

### *Program for the Next Session*

88. During the twenty-third session TWC planned to discuss: short reports on developments in plant variety protection; Molecular Techniques; Project to consider the Publication of Variety Descriptions; UPOV information databases; TGP documents; Assessment of distinctness for segregating characteristics; Efficiency of incomplete block designs in DUS herbage; Generalized linear models (logistic regression approach); COY: the selection of the optimum number of plants; COYU Methodology; Image analysis in parsnip; Standard probability levels; Calculation of relative tolerances in the number of off-types; Exchangeable software and TWC documents; Date and place of the next session; Future program

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

89. The Technical Working Party for Fruit Crops (TWF) held its thirty-fifth session in Marquardt, near Potsdam, Germany, from July 19 to 23, 2004, under the chairmanship of Mr. Erik Schulte (Germany). The TWF was welcomed by Mr. Johann Habben, Head of the Department of DUS Testing at the Bundessortenamt. The report of the session is provided in document TWF/35/11.

### *Participation*

90. The meeting was attended by 33 participants from 20 members of the Union and from two observer organizations.

### *Molecular Techniques*

91. The TWF received an introduction to document TWF/35/2 on Molecular Techniques. The TWF recommended a new summary paragraph, and also recommended that the Administrative and Legal Committee (CAJ) be invited to consider this addition.

### *TGP Documents*

92. The TWF discussed a number of draft TGP documents. In relation to TGP/4 Draft 1 "Management of Variety Collections", the TWF recommended possible amendments in the wording. It also discussed TGP/9 Draft 1 "Examining Distinctness", TGP/10. 2 Draft 3 Rev. "Assessing Uniformity According to the Features of Propagation", TGP/10.3.1 Draft 3 "Statistical Methods: COYU", TGP/10.3.2 Draft 3 "Statistical Methods: Off-Types", TGP/13 Draft 2 "Guidance for New Types and Species", TGP/14.2.1 Draft 3 "Botanical Terms: Plant Shapes", TGP/14.2.2 Draft 2 "Botanical Terms: Hair Types", TGP/14.2.3 Draft 2 "Botanical Terms: Color", and TGP/7/1 "Development of Test Guidelines".

*Project to Consider the Publication of Variety Descriptions*

93. The TWF received reports from the coordinators on the model studies for Apple and for Strawberry within the project to consider the publication of variety descriptions. In the case of Apple, the TWF noted that the only qualitative characteristic in the Test Guidelines (Tree: type) had produced consistent results across all authorities, however, the results for other characteristics had shown different degrees of variation for the same variety. It was further noted that the information was also to be sent to experts in France for an analysis to be conducted using GAIA. In the case of Strawberry, the TWF was informed that lists of varieties from more than 10 authorities had been received and that an appropriate sample on which to request descriptions would be selected. It was agreed that, if required, an expert from France would assist in the study.

*Other items*

94. The TWF considered document TWF/35/3 “UPOV Information Databases”, document TWF/35/5 “Variety Denomination Classes”, TWO/37/7-TWF/35/7 “Criteria for Determining Off-Type Plants”, introduced by the Chairman of the TWO, and TWF/35/8 “Definition of Maturity of Fruit”.

*Test Guidelines*

95. The TWF finalized the draft Test Guidelines for Apple (Revision) and Apricot (Revision) for submission to the TC. The TWF planned to continue discussions on Test Guidelines for a total of 19 species. It also decided to consider starting discussions on draft Test Guidelines for Pistachio (*Pistacia vera* L.), and Pomegranate (*Punica granatum* L.) at its thirty-seventh session.

*Chairmanship*

96. The TWF agreed to propose to the TC that it recommend to the Council that it elect Mr. Alejandro Barrientos Priego (Mexico) as the next chairperson of the TWF.

*Date and Place of Next Session*

97. At the invitation of the expert from Japan, the TWF agreed to hold its thirty-sixth session in Japan from September 5 to 9, 2005.

*Program for the Next Session*

98. During the thirty-sixth 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; Project to consider the publication of variety descriptions; Review of UPOV information databases; Criteria for determining off-type plants; TGP documents; and Discussions and Recommendations on draft Test Guidelines.

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

99. The Technical Working Party for Ornamental Plants and Forest Trees (TWO) held its thirty seventh session in Hanover, Germany, from July 12 to 16, 2004, under the chairmanship of Chris Barnaby (New Zealand). The TWO was welcomed by Mr. Udo von Kröcher, President of the Bundessortenamt, on behalf of the German Bundessortenamt. The report appears in document TWO/37/12.

### *Participation*

100. The meeting was attended by 34 participants from 16 members of the Union and three observer organisations. The TWO noted that the preparatory Workshop held during the afternoon of July 11, 2004, prior to the TWO meeting, was attended by 11 participants, from five members of the Union.

### *Molecular Techniques*

101. The TWO discussed document TWO/37/2 concerning the Use of Molecular Techniques in DUS Testing. The TWO agreed with the recommendation of the Technical Committee that the annex to TWO/37/2 would be a suitable summary of the current situation in UPOV with the added wording improvement proposed by the TWA. It noted that there had not been a meeting of the *Ad Hoc* Crop Subgroup for Rose since the thirty-sixth session of the TWO. It was hoped that a meeting would be held when sufficient discussion papers are available.

### *TGP Documents*

102. A number of draft TGP documents were discussed. The TWO had particular interest in TGP/4 Draft 1 "Management of Variety Collections", TGP/9 Draft 1 "Examining Distinctness", TGP/13 Draft 1 "Guidelines for New Types and Species", and TGP/14.2.3 Draft 1 "Botanical Terms: Colour".

### *UPOV Information Databases*

103. The Office of the Union orally reported that checking of the UPOV codes was progressing and further checking by the relevant using authorities would be carried out using the list in Annex III to document TWO/37/3. The TWO agreed that all comments on the code should be sent to the Office by October 2004.

### *Project to Consider the Publication of Variety Descriptions*

104. Documents TWO/37/8 and TWO/37/10 provided the basis for discussion of the project to consider publication of variety descriptions. Ms. Andrea Menne (Germany) reported that for the model study for Petunia (TWO/37/8) there was a high level of consistency for the states of expression across varieties, however it would not be possible to obtain additional descriptions and usefully continue the study, because the UPOV Test Guidelines for Petunia were only adopted in 2003.

105. The Coordinator for the Model Study on Alstroemeria, Mr. Joost Barendrecht (Netherlands), reported that he hoped to receive further descriptions from at least one more country for the model study for Alstroemeria. The use of photographs, as part of the descriptions, would provide additional information. He noted that there was a lot of variation

for quantitative characteristics and also for some qualitative characteristics, which required further investigation. Several reasons were put forward for the observed variation. The information would also be used during the current review of the Test Guidelines by the TWO.

#### *Variety Denomination Classes*

106. The TWO discussed TWO/37/5 “Variety Denomination Classes” and agreed that, in general, classes for families should be removed in order to follow the general rule. In some cases it considered that it may be appropriate to group genera in one class, such as for *Chrysanthemum* and *Ajania*; and *Petunia* and *Calibrachoa*. Another case could be where the Test Guidelines include more than one genus. It agreed that ICNCP recommendations should also be consulted for other possible classes.

#### *Criteria for Determining Off-type Plants*

107. The Chairman introduced document TWO/37/7 Criteria for Determining Off-type Plants. A discussion followed with agreement that the preliminary survey had identified some differing views on determining off-type plants. Example information would be provided by experts from France (Lavender), Germany (Regal Pelargonium) and New Zealand (Hebe, Phormium) before the next session. The Chairman would then draft a new document using those examples and other information in TWO/37/7, TWO/36/5 and other relevant documents. The objective would be to develop guidance on handling off-types which could be incorporated into TGP/10 “Examining Uniformity”. The TWO agreed that it would not be appropriate to consider development of different uniformity standards for variegated varieties.

#### *Test Guidelines*

108. The TWO agreed to submit the draft Test Guidelines for *Argyranthemum*, *Anthriscum*, *Brachyscome* and *Waxflower*, to the TC. Discussion continued on eight other Test Guidelines, consisting of 4 revisions and 4 new Test Guidelines.

#### *Chairmanship*

109. The TWO agreed to propose to the TC that it recommend to the Council that it elect Ms. Sandy Marshall (Canada) as the next chairperson of the TWO.

#### *Date and Place of Next Session*

110. At the invitation of the expert from the Republic of Korea, the TWO agreed to hold its thirty-eighth session in Seoul from September 12 to 16, 2005.

#### *Program for the Next Session*

111. During its thirty-eighth 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; reports on molecular techniques, publication of variety descriptions, UPOV information databases and variety denomination classes; criteria for determining off-types; phytoplasma in *Poinsettia*; TGP documents and discussion of and recommendations for draft Test Guidelines.

### Technical Working Party for Vegetables (TWV)

112. The Technical Working Party for Vegetables (TWV) held its thirty-eighth session in Seoul, Republic of Korea, from June 7 to 11, 2004, under the chairmanship of Mr. Kees van Ettehoven (Netherlands). The detailed report of the meeting is provided in document TWV/38/9.

#### *Participation*

113. The meeting was attended by 29 experts from 12 member States and three observer organizations. The TWV noted that the Preparatory Workshop was attended by 15 participants.

#### *Molecular Techniques*

114. No meetings of the crop subgroups on molecular techniques had taken place. It was agreed to dissolve the Crop Subgroup for Mushroom as no further development was expected. Developments in tomato would be reported at a future meeting.

#### *TGP Documents*

115. During the session the draft TGP documents were discussed. Concerning TGP/9 “Examining Distinctness”, the possible usefulness of the GAIA software was discussed. In discussing TGP/10 “Examining Uniformity”, it was proposed to consider combining assessment by the number of off-types and by relative uniformity. Furthermore, it was noted that the relative uniformity concept for species where there were only a few applications could give problems if the first varieties were very uniform. Further comments were later received through correspondence.

#### *UPOV Information Databases*

116. The TWV noted the progress made on the GENIE database and made recommendations related to the UPOV codes of vegetable varieties.

#### *Project to Consider the Publication of Variety Descriptions*

117. The first results on the Publication of Variety Descriptions for the model studies on Chinese cabbage and Lettuce were discussed.

#### *Variety Denomination Classes*

118. The TWV noted the developments in the Working Group on Variety Denominations concerning recommendations on variety denominations and commented on the proposals concerning classes involving vegetables.

#### *Test Guidelines*

119. The TWV agreed to send draft Test Guidelines for Ginseng, Chick pea (Revision), French bean (Revision), Industrial Chicory (Revision), Parsley (Revision), Pepper (Revision) and Melon (Revision) to the TC. However, certain matters in the draft Test Guidelines for

Melon were not resolved in time for their submission to the forty-first session of the Technical Committee.

120. The TWV agreed to re-discuss draft Test Guidelines for Husk Tomato, Rosemary and Pea, at its thirty-ninth session. It also agreed to start discussions on draft Test Guidelines for Broccoli (partial Revision), Corn salad (Revision), Cucumber, Gherkin (Revision), Lettuce (Partial Revision on Bremia), Mint, Rocket and *Cucurbita moschata*. It was agreed that a discussion on Test Guidelines for Sweetcorn should be conducted in conjunction with the TWA.

#### *Chairmanship*

121. The TWV agreed to propose to the TC that it recommend to the Council that it elect Mr. Niall Green (United Kingdom) as the next chairperson of the TWV.

#### *Date and Place of Next Session*

122. At the invitation of the expert from Slovakia, the TWV agreed to hold its thirty-ninth session in Nitra (Slovakia) from June 6 to 10, 2005.

#### *Program for the Next Session*

123. During the thirty-ninth session, the TWV planned to discuss or re-discuss: Short reports on developments in plant variety protection, Molecular Techniques, Project to consider the Publication of Variety Descriptions, Review of UPOV Information Databases, TGP Documents, Discussion on draft Test Guidelines, Date and place of next session and Future program.

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

124. No meeting of the BMT was held in 2004.

*125. 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]