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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

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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-ninth session in Geneva from March 18 to 20, 2013, chaired by Mr. Joël Guiard (France), Chairperson of the TC. The report on the conclusions of the session is contained in document TC/49/41 "Report on the Conclusions". The detailed report will be provided in document TC/49/42 "Report".

4. The meeting was attended by 77 participants from 36 members of the Union, seven observer States and four 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 (oral report by the Vice Secretary-General)

5. The Vice Secretary-General provided an oral report, in the form of a Powerpoint presentation, on the sixty-fifth and sixty-sixth sessions of the CAJ, eighty-third and eighty-fourth sessions of the Consultative Committee and the twenty-ninth extraordinary session and the forty-sixth ordinary session of the Council. The TC noted that a copy of that presentation would be provided as an annex to the detailed report (see document TC/49/41 "Report on the Conclusions", paragraph 7).

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, in the form of Powerpoint presentations, 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). 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-eighth session of the TC. It noted that copies of those presentations would be provided in an annex to the detailed report (see document TC/49/41 "Report on the Conclusions", paragraph 8).

Matters arising from the Technical Working Parties

7. The TC considered document TC/49/3.

Guidance for drafters of Test Guidelines

8. The TC noted the comments of the TWPs, at their sessions in 2012, on revised "Practical Guidance for Drafters (Leading Experts) of UPOV Test Guidelines", Section "Test Guidelines for Discussion at the Technical Working Party", as set out in Annex I to document TC/49/3.

9. The TC agreed that, in general, Test Guidelines should be withdrawn from discussion in the TWPs if the Leading Expert was not present at the session, unless a suitable alternative expert could be arranged to act as the Leading Expert sufficiently in advance of the session, or unless the Leading Expert was able to attend by electronic means. The TC agreed that guidance in that regard should be included in a future revision of document TGP/7, Section 2.2.5.3 "Requirements for Draft Test Guidelines to be considered by the Technical Working Parties".

10. The TC agreed that it would not be appropriate to acknowledge the name of the Leading Expert in the draft or adopted Test Guidelines, because the Leading Expert was acting on behalf of a member of the Union rather than in an individual capacity. The TC also noted that there was often more than one expert involved in the preparation of Test Guidelines. For the purposes of effective communication, the TC recalled that the name and e-mail address of the Leading Expert was indicated in the TWP report and in the TG drafters' webpage (see document TC/49/41 "Report on the Conclusions", paragraphs 10 to 12).

Web-based TG Template

11. The TC received a presentation on the project for the development of a web-based TG Template by the Office of the Union and an expert from Australia and noted that a copy of the presentation would be

provided in an addendum to document TC/49/3. The Vice Secretary-General reported that it was planned to develop a prototype for testing by interested experts by the end of 2013.

12. The TC expressed its support for the project, noting that the template would provide sufficient flexibility for drafters of Test Guidelines to introduce proposals that were not covered by existing standard wording. It noted the comments of the TWPs at their sessions in 2012 on the project and noted the need to retain flexibility in the structure for further development of Test Guidelines by UPOV members (see document TC/49/41 "Report on the Conclusions", paragraphs 13 and 14).

Experiences with new types and species

13. The TC noted the information concerning new types and species, as set out in document TC/49/3 (see document TC/49/41 "Report on the Conclusions", paragraph 15).

Levels of Uniformity According to the State of Expression of Obligatory Disease Resistance Characteristics and Varieties not bred for having such Disease Resistance

14. The Delegation of the European Union informed the TC that, due to recent developments, data on "Levels of Uniformity According to the State of Expression of Obligatory Disease Resistance Characteristics and Varieties not bred for having such Disease Resistance" from members of the European Union, would not be presented at the forty-seventh session of the TWV and would be presented at a later session (see document TC/49/41 "Report on the Conclusions", paragraph 16).

Data Loggers

15. The TC agreed to request the Office of Union to issue a new circular concerning hand held data capture devices, inviting further entries in advance of the thirty-first session of the TWC (see document TC/49/41 "Report on the Conclusions", paragraph 17).

Survey to seek views on the effectiveness of the Technical Working Parties

16. The TC received presentations by the Office of the Union on a survey of participants in the TWO, at its forty-fifth session held in Jeju, Republic of Korea, from August 6 to 10, 2012, and in the TWF, at its forty-third session, held in Beijing, China, from July 30 to August 3, 2012, and an analysis of participation in the TC and the TWPs, copies of which it noted would be provided in an addendum to document TC/49/3.

17. The TC noted the following proposals concerning possible means of improving the effectiveness of the TWPs, as a basis for future consideration:

(a) the possible benefits of regional distribution of the TWP venues within a year, in order to maximize opportunities for participation;

(b) inviting the TWPs to consider modifying the length (shorten or lengthen) of the TWP sessions according to the agenda and number of Test Guidelines to be discussed;

(c) providing a summary of the main changes to, and key features of, relevant TGP documents (e.g. TGP/7, TGP/8 and TGP/14), under agenda item 3(b) "Reports on developments within UPOV";

(d) preparing a "quick reference" guide document for TWP participants with extracts from, for example, documents TGP/7 and TGP/14, covering frequently arising matters in the Test Guidelines (e.g. ratio/shape, color, notes, types of expression, method of observation);

(e) adding a decision paragraph in the TWP documents, to help to reach a clear conclusion on important points; and

(f) inviting the TWPs to review the results of the survey of the TWO and TWF participants, at their sessions in 2013.

18. In addition, the TC agreed that consideration should be given to the organization of subgroups for specific matters, e.g. TGP document subgroups and to the holding of Technical Working Parties in consecutive weeks, such as was arranged for the TWO and TWF.

19. The TC agreed to the proposal for the Office of the Union to organize a survey:
- (a) for participants at the TWP sessions in 2013, as proposed in Annex III of document TC/49/3;
 - (b) for participants at the Preparatory Workshops in 2013, as explained in document TC/49/10;
 - (c) for participants at the forty-ninth session of the TC as proposed in Annex IV of document TC/49/3;
- and
- (d) for those members of the Union that did not attend the TC and TWP sessions.
20. The TC agreed that consideration of possible means of improving the effectiveness of the TWPs should be deferred until its fiftieth session in order to consider the results of the surveys above.
21. The TC agreed that it would be important to survey the members of the Union that had not attended the TC and the TWPs in order to understand the reasons why they had chosen not to attend (see document TC/49/41 "Report on the Conclusions", paragraphs 18 to 23).

TGP documents

22. The TC considered the following documents in conjunction with document TC/49/5.

(a) *New TGP Document*

TGP/15 ~~[NEW TYPES OF CHARACTERISTICS]~~ [GUIDANCE ON THE USE OF BIOCHEMICAL AND MOLECULAR MARKERS IN THE EXAMINATION OF DISTINCTNESS, UNIFORMITY AND STABILITY (DUS)]

23. The TC considered document TGP/15/1 Draft 4.

24. The TC agreed, subject to agreement by the CAJ at its sixty-seventh session, to be held in Geneva on March 21, 2013, to submit document TGP/15/1 Draft 5 "Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)" as the basis for adoption of TGP/15 by the Council, at its forty-seventh session, to be held on October 24, 2013. The TC noted that the editing of the original English text and the French, German and Spanish translations would be checked by the relevant members of the Editorial Committee (TC-EDC) prior to submission of the draft of document TGP/15/1 to the Council.

25. The TC noted that document TGP/15/1 could be revised in the future, for instance to incorporate additional examples for the models (see document TC/49/41 "Report on the Conclusions", paragraphs 26 to 28).

(b) *Revision of TGP Documents*

TGP/14: GLOSSARY OF TERMS USED IN UPOV DOCUMENTS

Revision of existing sections of document TGP/14: Section 2: Botanical Terms, Subsection 2: Shapes and Structures

Revision of document TGP/14: Section 2: Botanical Terms, Subsection 3: Color

26. The TC considered documents TC/49/35 and TC/49/36.

27. The TC agreed, subject to agreement by the CAJ at its sixty-seventh session, to be held in Geneva on March 21, 2013, to invite the Council to adopt document TGP/14/2 "Glossary of Terms Used in UPOV Documents", at its forty-seventh session, to be held on October 24, 2013, on the basis of documents TC/49/35 and TC/49/36, subject to the following amendments:

document TC/49/35, Annex I, Section 1.5
document TC/49/36, Part IV, 4.1
“Schematic overview” and 4.2.1.2

to amend “narrow” and “broad” to “long” and “short”
to amend “sharply” to “sharp”

28. The TC noted that the updating of definitions of terms and indices, and the checking of the French, German and Spanish translations of the original English text by the relevant members of the TC-EDC, would be done prior to submission of the draft of document TGP/14/2 to the Council (see document TC/49/41 “Report on the Conclusions”, paragraphs 29 to 31).

TGP/0: LIST OF TGP DOCUMENTS AND LATEST ISSUE DATES

29. The TC noted that the Council would be invited to adopt document TGP/0/6, in order to reflect the adoption of documents TGP/15/1 and TGP/14/2 (see document TC/49/41 “Report on the Conclusions”, paragraph 32).

TGP/7: DEVELOPMENT OF TEST GUIDELINES

30. The TC considered document TC/49/16.

31. The TC noted the following matters on which the TC had previously reached a conclusion with regard to a future revision of document TGP/7 “Development of Test Guidelines” (see document TC/49/41 “Report on the Conclusions”, paragraphs 33 and 34):

Coverage of Types of Varieties in Test Guidelines

(see document TC/47/26 “Report on the Conclusions”, paragraph 54)

Selection of Asterisked Characteristics

(see document TC/47/26 “Report on the Conclusions”, paragraph 59)

Standard References in the Technical Questionnaire

(see document TC/47/26 “Report on the Conclusions”, paragraph 68)

Applications for Varieties with Low Germination

(see documents TC/47/26 “Report on the Conclusions”, paragraph 60 and TC/48/22 “Report on the Conclusions”, paragraphs 38 and 39)

Procedure for the Development of Test Guidelines

(see document TC/48/22 “Report on the Conclusions”, paragraph 48)

32. The TC agreed to the following text for GN 7 (TG Template: Chapter 2.3) “Quantity of plant material required” (see document TC/49/41 “Report on the Conclusions”, paragraph 35):

“The drafter of the Test Guidelines should consider the following factors when determining the quantity of material required:

- (i) Number of plants/ parts of plants to be examined
- (ii) Number of growing cycles
- (iii) Variability within the crop
- (iv) Additional tests (e.g. resistance tests, bolting trials)
- (v) Features of propagation (e.g. cross-pollination, self-pollination, vegetative propagation)
- (vi) Crop type (e.g. root crop, leaf crop, fruit crop, cut flower, cereal, etc.)
- (vii) Storage in variety collection
- (viii) Exchange between testing authorities
- (ix) Seed quality (germination) requirements
- (x) Cultivation system (outdoor/glasshouse)
- (xi) Sowing system
- (xii) Predominant method of observation (e.g. MS, VG)

“In general, in the case of *plants* required only for a single growing trial (e.g. no plants required for special tests or variety collections), the number of plants requested in Chapter 2.3 often corresponds to the

number of plants specified in Chapters 3.4 "Test Design" and 4.2 "Uniformity". In that respect, it is recalled the quantity of plant material specified in Chapter 2.3 of the Test Guidelines is the minimum quantity that an authority might request of the applicant. Therefore, each authority may decide to request a larger quantity of plant material, for example to allow for potential losses during establishment (see GN 7 (a)). In relation to the number of plants specified in Chapter 2.3, the number of plants/parts of plant to be examined (Chapter 4.1.4), should at least allow for the possibility of off-type plants within the tolerated number to be excluded from observations."

33. The TC agreed that it would not be appropriate to seek to develop Additional Standard Wording (ASW) for Chapter 2.3 "Minimum Quantity of Plant Material" (see document TC/49/41 "Report on the Conclusions", paragraph 36).

34. The TC noted that a summary of information on adopted Test Guidelines would be prepared by the Office of the Union for presentation to the Subgroups of Interested Experts (see document TC/49/41 "Report on the Conclusions", paragraph 37).

35. The TC recalled that it had previously agreed that the guidance in document TGP/7, GN 7 should be extended to encourage Leading Experts to consider the quantity of plant material required for similar crops in order to seek consistency as far as that was appropriate. In that regard, it had agreed that a summary of the following information should be prepared by the Office of the Union for all adopted Test Guidelines and made available to Leading Experts on the TG Drafters' webpage in order that information on Test Guidelines for similar crops could be presented to the Subgroup of Interested Experts by the Leading Expert (see document TC/49/41 "Report on the Conclusions", paragraph 38)

- (a) Chapter 2.3 Minimum quantity of plant material to be supplied by the applicant
- (b) Chapter 3.1 Number of growing cycles
- (c) Chapter 3.4.1 Each test should be designed to result in a total of at least X plants
- (d) Chapter 4.1.4 Number of plants / parts of plants to be examined for distinctness
- (e) Chapter 4.2 Number of plants to be examined for uniformity
- (f) Number of plants for special tests (e.g. disease resistance)

(see document TC/47/26 "Report on the Conclusions", paragraph 57).

Guidance on number of plants to be examined (for distinctness)

36. The TC considered document TC/49/17.

37. The TC agreed to the following text as the basis for the inclusion of a Guidance Note in a future revision of document TGP/7, Section 4.1.4, and in a future revision of TGP/9: "Examining Distinctness" (see document TC/49/41 "Report on the Conclusions", paragraph 40):

"1. The observation of the '*typical*' expression of characteristics of a variety in a given environment is essential for the assessment of distinctness. The precision of the observed (mean) expression of the varieties to be compared is a critical element for the consideration of whether a difference is a clear difference.

"2. In the case of qualitative characteristics, a low number is sufficient to identify the expression of a variety. In general, the number of plants for the assessment of distinctness is not a limiting factor for the number of plants in the trial. Thus, the number of plants for the assessment of qualitative characteristics is not essential for harmonization.

"3. In case of quantitative characteristics (and pseudo-qualitative characteristics), the variation within the variety has to be taken into account for defining a clear difference (by expert judgment or exact statistics). Due to the relation between variation within the varieties and the required difference to be considered as a clear difference for the establishment of distinctness the precision of records is important. The precision of records (mean values) is influenced by the sample size. Therefore, the appropriate sample size should be indicated in the Test Guidelines for the purpose of harmonization.

"4. The following general principals should be taken into account:

"Considerations for the number of plants to be observed for distinctness in case of QN (in some cases PQ)

- (a) Observation on the plot as a whole (VG/MG)
 - the indicated number should be considered as minimum number

- (b) Observation on subsample from plot (VG/MG)
 - the indicated number should be considered as minimum number
- (c) Observations on individual plants (VS/MS)
 - the number of plants is important for precision of record
 - the specific number should be indicated

“Considerations for the number of plants for candidate varieties and varieties to be compared with the candidate varieties

“5. The required precision of records depends on the size of the difference between the candidate variety and the varieties of common knowledge. If two varieties are very similar it is important to ensure the same precision of the records for both varieties. The number of plants indicated in the Test Guidelines applies to both the candidate variety and the similar variety of common knowledge. In other cases, it may be possible to include in the trial a lower number of plants for the variety of common knowledge, provided that uniformity does not have to be assessed for that variety, i.e. varieties in the variety collection.”

Guidance for method of observation

38. The TC considered document TC/49/18.

39. The TC agreed with the proposed revision of document TGP/7, GN 25 (TG Template: Chapter 7: column 2, header row 1 or 2) “Recommendations for conducting the examination”, on the basis of the following text, for inclusion in a future revision of document TGP/7 (see document TC/49/41 “Report on the Conclusions”, paragraph 42):

“This box provides the key for guidance on conducting the examination. For example, recommendations on the method of observation (e.g.: visual assessment or measurement; observation of single plants or a group of plants) or type of plot (e.g.: spaced plants; row plot; drilled plot; special test) may be provided. ASW 4(b) provides possible standard wording.

“Method of observation (visual or measurement)

“1. Document TGP/9 “Examining Distinctness” explains the following with regard to method of observation:

‘4.2 Method of observation (visual or measurement)

‘The expression of characteristics can be observed visually (V) or by measurement (M).

‘4.2.1 Visual observation (V)

‘4.2.1.1 ‘Visual’ observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts).

[...]

‘4.2.2 Measurement (M)

‘Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.’

“2. The following examples are intended to illustrate the ways of considering the method of observation for characteristics such as time of flowering and counts.

“(a) Time of Flowering

Time of flowering		
QN	early	3
	medium	5
	late	7

“Scenario A (Explanation: the time of flowering is assessed by date)

"3. The DUS trial is visited on various dates to assess whether each variety has reached the time of flowering. The assessment of whether 50% of plants have emitted the stigma in the main panicle is made by counting the number of plants that have emitted their stigmas to determine the percentage, or by an overall assessment of the percentage.

"4. In this case, the method of observation would be measurement (M), because the determination of the state of expression will be according to the date (= measurement on a time scale) at which a variety was found to have reached the time of flowering. A date is recorded for each variety, which is transformed into notes after assessment of all varieties.

"Scenario B (Explanation: the time of flowering is assessed by comparison with other varieties)

"5. The DUS trial is visited on one or more occasions to assess the time of flowering by reference to example varieties.

"6. In this scenario, the time of flowering is a visual (V) observation because an overall visual observation is made as to the time of flowering for a particular variety by reference to the state of flowering of example varieties, without reference to a date of visit. A note is recorded for each variety in relation to the variation between varieties (e.g. early, medium, late).

"(b) Number

"7. If a characteristic is observed by counting (for example 'Number of lobes' observed by counting), the assessment is a measurement (M). If a characteristic is observed by estimation (for example 'Number of lobes' observed by estimation), the assessment is a visual observation (V)."

Example varieties

40. The TC considered document TC/49/19.

41. The TC agreed to the revision of document TGP/7 "Annex 3: Guidance Notes (GN) for the TG Template, GN 28 (TG Template: Chapter 6.4) – Example varieties", on the basis of the Annex of document TC/49/19, for inclusion in a future revision of document TGP/7 (see document TC/49/41 "Report on the Conclusions", paragraph 44).

Providing photographs with the Technical Questionnaire

42. The TC considered document TC/49/20.

43. The TC agreed to the new Additional Standard Wording (ASW) and Guidance Note (GN) for "providing photographs with the Technical Questionnaire", on the basis of the Annex to document TC/49/20, for inclusion in a future revision of document TGP/7.

44. The TC agreed that the "Guidance for Providing Photographs with the Technical Questionnaire" should be provided to members of the Union by means of a link to the relevant part of the UPOV website. That link would be provided in conjunction with ASW 16 in the Technical Questionnaire, section 7. The TC noted that the link could be deleted by members of the Union when developing authorities' own test guidelines. The TC also agreed to add the guidance in document TGP/9 Section 2.6 "Photographs" in a future revision of that document (see document TC/49/41 "Report on the Conclusions", paragraphs 46 and 47).

TGP/8: TRIAL DESIGN AND TECHNIQUES USED IN THE EXAMINATION OF DISTINCTNESS, UNIFORMITY AND STABILITY

Revision of document TGP/8: Part I: DUS Trial Design and Data Analysis,
New Section 2: Data to be recorded

45. The TC considered document TC/49/21.

46. The TC agreed the proposed text for New Section 2: "Data to be Recorded" be included in a future revision of document TGP/8: Part I: Trial Design and Data Analysis, as set out in Annex to document TC/49/21, subject to revision of TGP/8: Part II, Sections 3, Section 4 and Section 10, as set out in annexes to documents TC/49/24, TC/49/26 and TC/49/27 (see document TC/49/41 "Report on the Conclusions", paragraph 49).

Revision of document TGP/8: Part I: DUS Trial and Design and Data Analysis,
New Section: Minimizing the Variation due to Different Observers

47. The TC considered document TC/49/22.

48. The TC agreed to request the expert from the Netherlands to prepare a new draft section on “Minimizing the Variation due to Different Observers” for consideration by the TWPs at their sessions in 2013, on the basis of the comments by the TWPs at their sessions in 2012, and the TC-EDC at its meeting in January 2013, and, in particular, in order to include guidance on PQ and QN/MG characteristics (see document TC/49/41 “Report on the Conclusions”, paragraph 51).

Revision of document TGP/8: Part I: DUS Trial Design and Data Analysis,
New Section: Reduction of Size of Trials

49. The TC considered document TC/49/23.

50. The TC agreed that the proposed text for a new section on “Reduction of Size of the Trials”, on the basis of the Annex of document TC/49/23, be included in a future revision of document TGP/8, after deletion of the first sentence in paragraph 1.6, which reads as follows “[t]his section is of relevance to the reader interested in technical details” (see document TC/49/41 “Report on the Conclusions”, paragraph 53).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
Section 3: The Combined-Over-Years Criteria for Distinctness (COYD)

51. The TC considered document TC/49/24.

52. The TC agreed that the proposed revised text, as set out in the Annex to document TC/49/24, be included in a future revision of document TGP/8: Part II: Techniques Used in DUS Examination, Section 3: “The Combined-Over-Years Criteria for Distinctness (COYD)” (see document TC/49/41 “Report on the Conclusions”, paragraph 55).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
Section 3, Subsection 3.6: Adapting COYD to special circumstances

53. The TC considered document TC/49/25.

54. The TC agreed that the text proposed in the Annex to document TC/49/25, be included as Subsection 3.6 in a future revision of document TGP/8: Part II: Techniques Used in DUS Examination, Section 3 (see document TC/49/41 “Report on the Conclusions”, paragraph 57).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
Section 4: 2x1% Method- Minimum Number of Degrees of Freedom for the 2x1% Method

55. The TC considered document TC/49/26.

56. The TC agreed that the proposed revised text, as set out in the Annex to document TC/49/26, be included in a future revision of document TGP/8: Part II: Techniques Used in DUS Examination, Section 4 (see document TC/49/41 “Report on the Conclusions”, paragraph 59).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section 10: Minimum Number of Comparable Varieties for the Relative Variance Method

57. The TC considered document TC/49/27.

58. The TC noted the proposed amendments of revision of Section: 10 of document TGP/8, as set out in Annex II of document TC/49/27.

59. The TC agreed to invite an expert from Australia to prepare a new draft of Section: 10 of document TGP/8 with a recommendation on the minimum number of comparable varieties, for consideration by the TWPs at their sessions in 2013. The Delegation of Australia explained that the minimum number was one. (see document TC/49/41 “Report on the Conclusions”, paragraphs 61 and 62)

Revision of document TGP/8: Part II: Techniques used in DUS Examination,
New Section 11: Examining DUS in Bulk Samples

60. The TC considered document TC/49/28.

61. The TC agreed to replace the proposed text for new Section 11 “Examining DUS in Bulk Samples” in the Annex to document TC/49/28 with guidance on the use of characteristics examined on the basis of bulk samples, in order to ensure that the characteristics fulfill the basic requirements for a characteristic. In particular, it agreed that Leading Experts of Test Guidelines could be requested to provide data from different years to demonstrate that the expression of the characteristic is “sufficiently consistent and repeatable in a particular environment”. It was further agreed that, on the basis of information provided to the TWPs, consideration could be given to statistical analysis for such characteristics (see document TC/49/41 “Report on the Conclusions”, paragraph 64).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions

62. The TC considered document TC/49/29.

63. The TC requested the Office of the Union to request experts from the United Kingdom, France and Germany, or other members of the Union, to provide a common data set of self-pollinated and/or vegetatively propagated varieties for performing a practical exercise (see document TC/49/41 “Report on the Conclusions”, paragraph 66).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Guidance of Data Analysis for Blind Randomized Trials

64. The TC considered document TC/49/30.

65. The TC agreed to the preparation of a new draft for a new Section on “Guidance for Data Analysis for Blind Randomized Trials” by an expert from France, on the basis of the Annex to document TC/49/30 and the comments by the TWPs at their sessions in 2012, and the TC-EDC at its meeting in 2013, for consideration by the TWPs at their sessions in 2013 (see document TC/49/41 “Report on the Conclusions”, paragraph 68).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Guidance for Development of Variety Descriptions

66. The TC considered document TC/49/31.

67. The TC agreed that the information provided in Annex I of document TC/49/31 should be combined with the information in document TC/49/29 and to discontinue the development of a separate section (see document TC/49/41 “Report on the Conclusions”, paragraph 70).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Statistical Methods for Visually Observed Characteristics

68. The TC considered document TC/49/32.

69. The TC agreed that it would not be appropriate to continue the development of a section on “Statistical Methods for Visually Observed Characteristics”, unless new guidance was provided beyond the methods already provided in document TGP/8. In that regard, it requested the TWC to clarify if it proposed to modify an existing method or provide a new additional method (see document TC/49/41 “Report on the Conclusions”, paragraph 72).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Examining Characteristics Using Image Analysis

70. The TC considered document TC/49/33.

71. The TC noted the information on software and hardware used for image analysis, as set out in Annex I to document TC/49/33.

72. The TC noted that the recommendation of the TWC concerning the inclusion of the AIM software from France in document UPOV/INF/16 "Exchangeable Software," and the request for the Office of the Union to translate the AIM software into English, would be considered in document TC/49/12 (see document TC/49/41 "Report on the Conclusions", paragraphs 74 and 75).

Revision of document TGP/8: Part II: Techniques Used in DUS Examination,
New Section: Statistical Methods for Very Small Sample Sizes

73. The TC noted the information provided in document TC/49/34.

74. The TC agreed not to pursue a proposed new section: "Statistical Methods for Very Small Sample Sizes" in document TGP/8 (see document TC/49/41 "Report on the Conclusions", paragraph 77).

(c) *New Proposals for Future Revision of TGP Documents*

TGP/7: DEVELOPMENT OF TEST GUIDELINES

Duration of test

75. The TC agreed that no further information needed to be provided with regard to duration of test as set out in Chapter 3.1 and 4.1.2. as follows:

Chapter 3.1: "The minimum duration of test should normally be two independent growing cycles."

Chapter 4.1.2: "The differences observed between varieties may be so clear that more than one growing cycle is not necessary."

76. In that regard, the TC agreed that Chapters 3.1 and 4.1.2 were not contradictory, as the first relates to the examination of distinctness, uniformity and stability, and the development of a variety description whereas the latter refers only to distinctness (see document TC/49/41 "Report on the Conclusions", paragraphs 78 and 79).

Growing cycle

77. The TC invited the TWF to consider whether it would be necessary to develop a new ASW for a growing cycle for tropical species (see document TC/49/41 "Report on the Conclusions", paragraph 80).

Source of propagating material

78. The TC noted that information on the influence of the method of vegetative propagation and origin of propagating material, taken from within the plant, on future plant development and characteristic expression and how this might be addressed in Test Guidelines would be presented to the TWF and TWO at their sessions in 2013 by experts from the European Union (see document TC/49/41 "Report on the Conclusions", paragraph 81).

Number of plants required for description

79. The TC agreed that it was not necessary to provide further guidance on the number of plants required for description in a future revision of document TGP/7 because the Test Guidelines state that "The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions." (see document TC/49/41 "Report on the Conclusions", paragraph 82).

Growth stages

80. The TC agreed that clarification should be provided in a future revision of document TGP/7 with regard to the inclusion of growth stage keys in Chapter 8 of the Test Guidelines and requested the Office of the Union to prepare draft guidance for consideration by the TWPs at their sessions in 2013 (see document TC/49/41 "Report on the Conclusions", paragraph 83).

TGP/9: EXAMINING DISTINCTNESS

81. The TC agreed that further guidance be provided on the number of plants to be examined for distinctness in a future revision of document TGP/9, on the basis of the guidance provided in document TC/49/17, Annex II (see document TC/49/41 "Report on the Conclusions", paragraph 84).

TGP/14: GLOSSARY OF TERMS USED IN UPOV DOCUMENTS

82. The TC agreed that a definition for "dot" be provided in a future revision of document TGP/14 Section 2: "Botanical Terms, Subsection 3: Color" and requested the Office of the Union to prepare a draft for consideration by the TWPs at their sessions in 2013.

83. The TC agreed that guidance should be provided on the risks in providing illustrations of color in Test Guidelines. However, the TC agreed that such guidance should be provided in a future revision of document TGP/7 rather than in document TGP/14. The TC requested the Office of the Union to prepare a draft for consideration by the TWPs at their sessions in 2013 (see document TC/49/41 "Report on the Conclusions", paragraphs 85 and 86).

Program for the Development of TGP Documents

84. The program for the development of TGP documents, as approved by the TC at its forty-ninth session is provided as the Annex and Appendices to this document.

Variety Denominations

85. The TC considered document TC/49/8.

86. The TC noted the developments concerning potential areas for cooperation between UPOV and the International Commission for the Nomenclature of Cultivated Plants of the International Union for Biological Sciences (IUBS Commission) and the International Society for Horticultural Science Commission for Nomenclature and Cultivar Registration (ISHS Commission), as set out in paragraphs 24 and 25 of document TC/49/8 (see document TC/49/41 "Report on the Conclusions", paragraph 89).

Information and Databases

(a) UPOV information databases

87. The TC considered document TC/49/6 and received a demonstration of the PLUTO Plant Variety Database by Mr. Glenn Mac Stravic, Head, Brand Database Section, World Intellectual Property Organization (WIPO).

UPOV CODE SYSTEM

88. The TC noted the amendments to UPOV codes and the plan of the Office of the Union to prepare tables of UPOV code additions and amendments, for checking by the relevant authorities, for each of the TWPs sessions in 2013 (see document TC/49/41 "Report on the Conclusions", paragraph 91).

PLANT VARIETY DATABASE

89. The TC noted the following developments concerning the program for improvements to the Plant Variety Database with regard to the features of the PLUTO database.

Information on the latest date of submission by the contributors

90. For the short-term, information on the latest date of submission by the contributors was provided for the PLUTO database in the form of a pdf document. However, in the longer term, it was planned that the date of submission would be provided for individual data retrieved from the database (see document TC/49/41 "Report on the Conclusions", paragraph 93).

Search rules

91. The TC noted the demonstration of the search rules for the PLUTO database, including the new page that was provided for searching variety denominations (see document TC/49/41 "Report on the Conclusions", paragraph 94).

Facility to save search settings

92. The TC noted the demonstration of the possibilities to save search settings for the PLUTO database (see document TC/49/41 "Report on the Conclusions", paragraph 95).

User registration

93. The TC noted the demonstration of the registration system for users of PLUTO, which had been introduced in order that the use of PLUTO could be monitored, with a view to using that feedback for future improvements. It was noted that PLUTO would still be freely accessible (see document TC/49/41 "Report on the Conclusions", paragraph 96).

Alphabets

94. The TC noted that the necessary arrangements for the inclusion of data in the original alphabet, in addition to the data being provided in Roman alphabet, had been made.

95. The TC noted the information on the contribution of data and the provision of assistance to contributors, as set out in Annex IV to document TC/49/6 (see document TC/49/41 "Report on the Conclusions", paragraphs 97 and 98).

SURVEY OF MEMBERS OF THE UNION ON THEIR USE OF DATABASES AND ELECTRONIC APPLICATION SYSTEMS

96. The TC noted the plans of the Office of the Union to conduct a survey of members of the Union on their use of databases for plant variety protection purposes and on their use of electronic application systems (see document TC/49/41 "Report on the Conclusions", paragraph 99).

(b) Variety description databases

97. The TC considered document TC/49/9 and received a presentation by Mr. François Boulineau (France).

98. The TC noted the developments on variety description databases, as set out in document TC/49/9.

99. The TC noted that the results of the study on Pea would be presented to the TWA and the TWV in order to:

- (i) select characteristics to be used as grouping characteristics according to their qualities (discriminating power, distortion, use);
- (ii) develop a procedure to improve the pea database; and
- (iii) consider making the pea database available to all examination offices.

100. The TC agreed that the results of the study should be presented to other TWPs for their comments on the approach for managing variety collections and noted that the TWF would consider the results of the model study on Apple, as presented in document TC/41/9 "Publication of Variety Descriptions" (see document TC/49/41 "Report on the Conclusions", paragraphs 100 to 103).

(c) Exchangeable Software

101. The TC considered documents TC/49/12 and TC/49/12 Add..

I. REVIEW OF REQUIREMENTS FOR EXCHANGEABLE SOFTWARE

102. The TC reviewed the title of document UPOV/INF/16 "Exchangeable Software" and Section "1. Requirements for exchangeable software" and agreed that these texts should remain unchanged on the basis that the document concerned software that had been developed or customized by a member of the Union for UPOV purposes. However, it agreed that it would be useful to develop a separate information document that would allow members of the Union to provide information on the use of non-customized software and equipment (e.g. data loggers) that was used by members of the Union (see document TC/49/41 "Report on the Conclusions", paragraph 105).

II. SOFTWARE PROPOSED FOR INCLUSION IN UPOV/INF/16

103. The TC agreed with the recommendation of the TWC concerning the inclusion of "Information System (IS) used for Test and Protection of Plant Varieties in the Russian Federation" in document UPOV/INF/16, as set out in paragraph 18 of document TC/49/12. The TC also requested the Office of the Union to investigate the possibility of the translation into English of the user interfaces and user manual, on the basis that the Russian Federation would verify the translation provided by the Office of the Union.

104. The TC agreed with the recommendation of the TWC concerning the inclusion of the AIM software from France in document UPOV/INF/16, as set out in paragraph 19 of document TC/49/12. The TC requested the Office of the Union to translate the software to English of the user interfaces and user manual, on the basis that France would verify the translation provided by the Office of the Union (see document TC/49/41 "Report on the Conclusions", paragraphs 106 and 107).

III. INFORMATION ON USE BY MEMBERS

105. The TC agreed with the inclusion of the information contained in the Annex I to document TC/49/12 Add. for a revision of document UPOV/INF/16 by the Council at its forty-seventh session, to be held in Geneva on October 24, 2013. The TC noted that the comments of the TC would be reported to the CAJ at its sixty-seventh session, to be held in Geneva on March 21, 2013.

106. The TC noted that Mexico would be invited to present its proposed exchangeable software, as set out in Annex II to document TC/49/12 Add., at the thirty-first session of the TWC for possible inclusion in a future revision of document UPOV/INF/16 (see document TC/49/41 "Report on the Conclusions", paragraphs 108 and 109).

(d) Electronic Application Systems

107. The TC considered document TC/49/13.

108. The TC noted the developments concerning the use of standard references of the UPOV Model Application Form in the application forms of members of the Union and the endorsement by the CAJ of the development of prototype electronic form, as set out in document TC/49/13 (see document TC/49/41 "Report on the Conclusions", paragraph 111).

Method of Calculation of COYU

109. The TC considered document TC/49/11.

110. The TC agreed to request the TWC to continue its work with the aim of developing recommendations to the TC concerning the proposals to address the bias in the present method of calculation of COYU and noted that a document on possible proposals for improvements to COYU would be prepared for the TWC session in 2013 (see document TC/49/41 "Report on the Conclusions", paragraph 113).

Assessing Uniformity by Off-Types on the Basis of more than one Sample or Sub-Samples

111. The TC considered document TC/49/14.

112. The TC noted that the TWC would consider further information on the situations presented in Annex I to IV to document TC/49/14, such as the clarification of whether two growing cycles related to the use of the same sample and were carried out in the same year. The TC noted that the TWC had agreed that more detailed

information and further analysis were needed in order to give guidance on consequences on the use of the different approaches. The TWC had further agreed that France, Germany and the Netherlands would present one or more concrete situations in their countries and the statistical basis of their analysis for its next session, and that the statistical basis for the acceptable number of off-types in the subsample of 20 plants used in the context of a sample size of 100 plants (situation D) would be assessed by experts from France and Germany.

113. The TC agreed that the approach combining the results from two growing cycles, as set out in Annexes I and II, Situation A and B, was not inconsistent with the requirement for "independent" growing cycles. However, it agreed that care would be needed, for example when considering results that were very different in each of the growing cycles, such as when a type of off-type was observed at a high level in one growing cycle and was absent in another growing cycle.

114. The TC noted that an expert from New Zealand would make a presentation on testing of uniformity of Apple varieties arising from mutation at the TWF session in 2013 (see document TC/49/41 "Report on the Conclusions", paragraphs 115 to 117).

Use of electronic communication for meetings

115. The TC considered document TC/49/15.

116. The TC noted that the Consultative Committee, at its eighty-fourth session, held in Geneva on October 31, 2012, had approved the use of web conferencing by UPOV bodies, as considered appropriate by the UPOV body concerned, to facilitate participation by members of the Union and observers in accordance with the existing procedures. The Consultative Committee had recalled that the procedures concerning the invitations to the sessions of the UPOV bodies were contained in the UPOV Convention, rules of procedure, guidance for members of UPOV on ongoing obligations and related notifications, rules governing the granting of observer status to States, intergovernmental organizations and international non-governmental organizations in UPOV bodies and the rules governing access to UPOV documents. In accordance with those procedures, web conferencing participation would be by means of a password issued to the designated persons in the relevant UPOV body and participation would be monitored by the Office of the Union.

117. The TC noted that the Consultative Committee, at its eighty-fourth session, had also approved the use of webcasting of sessions of UPOV bodies for viewing by members of the Union and observers in accordance with the existing procedures, as considered appropriate by the UPOV body concerned. The Consultative Committee noted that the procedures concerning the invitations to the sessions of the UPOV bodies were contained in the UPOV Convention, rules of procedure, guidance for members of UPOV on ongoing obligations and related notifications, rules governing the granting of observer status to States, intergovernmental organizations and international non governmental organizations in UPOV bodies and the rules governing access to UPOV documents. In accordance with those procedures, webcasting viewing would be by means of a password issued to the designated persons in the relevant UPOV body and participation would be monitored by the Office of the Union. The TC also noted that the Consultative Committee, at its eighty-fourth session, had agreed that, in all other cases of webcasting, the Consultative Committee would be invited to approve any arrangements for a possible webcast (see document TC/49/41 "Report on the Conclusions", paragraphs 119 and 120).

Preparatory Workshops

118. The TC considered document TC/49/10.

119. The TC noted the report of the preparatory workshops held in 2012.

120. The TC agreed the proposed program for preparatory workshops for 2013, as set out in paragraphs 8 and 9 of document TC/49/10.

121. The TC approved the conduct of a survey for the participants of the preparatory workshops of the TWPs, at their sessions in 2013, with a view to improve the effectiveness of the preparatory workshops on the basis of the questionnaire as set out in the Annex to document TC/49/10 with the addition of a question to indicate new subjects that would be of interest. In addition, the TC agreed that a survey should be made of all TWP participants that did not attend the preparatory workshop in order to establish why they did not

attend. The TC also agreed that the Office of the Union should consider facilitating participation in the preparatory workshops by electronic means and noted that such an approach might mean that it would be possible to arrange such workshops independently of the TWPs and to cover a broader spectrum of training and information (see document TC/49/41 "Report on the Conclusions", paragraphs 122 to 124).

Molecular techniques

122. The TC considered document TC/49/7 and noted that document TGP/15/1 Draft 4 had been considered under agenda item 7 "TGP documents" (see document TC/49/5).

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

123. The TC agreed to propose to hold a coordinated meeting of the fourteenth session of the BMT with meetings of other relevant international organizations in 2014, as set out in document TC/49/7. It also agreed that, if it was not possible to organize a joint meeting with other organizations in 2014, a meeting of the BMT should be organized in the meantime (see document TC/49/41 "Report on the Conclusions", paragraph 126).

Discussion on molecular techniques¹

Application of models by members of the Union

USE OF CHARACTERISTIC SPECIFIC MOLECULAR MARKERS TO ASSESS SEASONAL TYPE IN BARLEY

124. The TC received a presentation on the use of characteristic specific molecular markers to assess seasonal type in barley by Mr. Andrew Mitchell (United Kingdom) (see document TC/49/41 "Report on the Conclusions", paragraph 127).

APPLICATIONS OF MOLECULAR DATA IN DUS TESTING

125. The TC received a presentation on the application of molecular data in DUS testing by Mr. Joël Guiard (France) (see document TC/49/41 "Report on the Conclusions", paragraph 128).

USE OF MOLECULAR TECHNIQUES IN BRAZIL

126. The TC received a presentation on the use of molecular techniques in Brazil by Mr. Fabricio Santana Santos (Brazil) (see document TC/49/41 "Report on the Conclusions", paragraph 129).

USE OF MOLECULAR TECHNIQUES IN THE RENEWAL OF REFERENCE MATERIAL

127. The TC received a presentation on the use of molecular techniques in the renewal of reference material by Mr. Kees van Ettehoven (Netherlands) (see document TC/49/41 "Report on the Conclusions", paragraph 130).

Presentation of the situation with regard to molecular techniques in other international organizations

SITUATION WITH REGARD TO THE USE OF MOLECULAR TECHNIQUES IN RELATION TO SEEDS IN THE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

128. The TC received a presentation on the situation with regard to the use of molecular techniques in relation to seeds in the International Organization for Standardization (ISO) prepared by Mr. Michael Sussman (ISO) and presented by Mr. Paul Zankowski (United States of America) (see document TC/49/41 "Report on the Conclusions", paragraph 131).

¹ Copies of the presentations made at the session are provided on the UPOV website at http://www.upov.int/meetings/en/details.jsp?meeting_id=28343.

SITUATION WITH REGARD TO THE USE OF MOLECULAR TECHNIQUES IN THE INTERNATIONAL SEED TESTING ASSOCIATION

129. The TC received a presentation on the situation with regard to the use of molecular techniques in the International Seed Testing Association (ISTA) by Mrs. Rita Zecchinelli (ISTA), during which Mrs. Rita Zecchinelli indicated the support of ISTA for a joint meeting with UPOV (see document TC/49/41 "Report on the Conclusions", paragraph 132).

SITUATION WITH REGARD TO USE OF MOLECULAR TECHNIQUES IN THE ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

130. The TC received a presentation on the situation with regard to the use of molecular techniques in the Organization for Economic Co-operation and Development (OECD) by Mr. Michael Ryan (OECD), during which Mr. Ryan indicated the support of OECD for a joint meeting with UPOV (see document TC/49/41 "Report on the Conclusions", paragraph 133).

Discussion

131. The TC recalled that the BMT is a group open to DUS experts, biochemical and molecular specialists and plant breeders, whose role is to:

- (i) Review general developments in biochemical and molecular techniques;
- (ii) Maintain an awareness of relevant applications of biochemical and molecular techniques in plant breeding;
- (iii) Consider the possible application of biochemical and molecular techniques in DUS testing and report its considerations to the TC;
- (iv) If appropriate, establish guidelines for biochemical and molecular methodologies and their harmonization and, in particular, contribute to the preparation of document TGP/15, "New Types of Characteristics." These guidelines to be developed in conjunction with the Technical Working Parties;
- (v) Consider initiatives from TWPs, for the establishment of crop specific subgroups, taking into account available information and the need for biochemical and molecular methods;
- (vi) Develop guidelines regarding the management and harmonization of databases of biochemical and molecular information, in conjunction with the TWC;
- (vii) Receive reports from Crop Subgroups and the BMT Review Group;
- (viii) Provide a forum for discussion on the use of biochemical and molecular techniques in the consideration of essential derivation and variety identification.

132. In that regard, it endorsed the initiative for a joint meeting with ISO, ISTA and OECD and including breeders, as a means of supporting the role of the BMT in relation to (i), (ii), (iv), (vi) and particularly (viii) above.

133. The TC agreed that there was a need to provide suitable information on the situation in UPOV with regard to the use of molecular techniques to a wider audience, including breeders and the public in general. That information should explain the potential advantages and disadvantages of the techniques, and the relationship between genotype and phenotype, which lay behind the situation in UPOV (see document TC/49/41 "Report on the Conclusions", paragraphs 134 to 136).

Use of DUS test reports by members of the Union²

Introduction

134. The TC received a presentation on cooperation in DUS examinations by the Office of the Union.

The use of DUS test reports in Australia

135. The TC received a presentation on the use of DUS test reports in Australia by Mr. Nik Hulse (Australia).

The use of DUS test reports in Brazil

136. The TC received a presentation on the use of DUS test reports in Brazil by Mr. Fabricio Santana Santos (Brazil).

The use of DUS test reports in the European Union

137. The TC received a presentation on the use of DUS test reports in the European Union by Mr. Carlos Godinho (European Union).

The use of DUS test reports in France

138. The TC received a presentation on the use of DUS test reports in France by Mr. Joël Guiard (France).

The use of DUS test reports in Germany

139. The TC received a presentation on the use of DUS test reports in Germany by Mrs. Beate Rücker (Germany).

The use of DUS test reports in Japan

140. The TC received a presentation on the use of DUS test reports in Japan by Mr. Kenji Numaguchi (Japan).

The use of DUS test reports in Mexico

141. The TC received a presentation on the use of DUS test reports in Mexico prepared by Ms. Enriqueta Molina Macías and Mr. Eduardo Padilla Vaca and presented by Mr. Padilla Vaca (Mexico).

The use of DUS test reports in the Netherlands

142. The TC received a presentation on the use of DUS test reports in the Netherlands by Mr. Kees van Ettehoven (Netherlands).

Discussion

143. The TC agreed to invite the Council to consider whether to copy the circular concerning cooperation in examination, e.g. see C/xx/5, to the TC designated persons in order to ensure that the maximum amount of information could be collected (see document TC/49/41 "Report on the Conclusions", paragraphs 137 to 146).

² Copies of the presentations made at the session are provided on the UPOV website at http://www.upov.int/meetings/en/details.jsp?meeting_id=28343

Test Guidelines

144. The TC considered document TC/49/2 Rev. 2

145. The TC adopted the Test Guidelines listed in the table below and agreed that they should be published on the UPOV website at the earliest opportunity:

**	TWP	Document No. N° du document Dokument-Nr. No del documento	English	Français	Deutsch	Español	Botanical name Nom botanique Botanischer Name Nombre botánico
NEW TEST GUIDELINES							
BR	TWV	TG/CORIA(proj.5)	Coriander, Cilantro, Collender, Chinese parsley	Coriandre	Koriander	Coriandro	<i>Coriandrum sativum</i> L.
AU	TWO	TG/DIANE(proj.5)	Flax-lily, Dianella	Dianella	Flachslilie, Dianella	Dianella	<i>Dianella</i> Lam. ex Juss.
BR/CN	TWO	TG/EUCAL(proj.10)	Eucalyptus	Eucalyptus	Eukalyptus	Eucalipto	<i>Eucalyptus</i> L'Hér. (Sub-genus <i>Symphyomyrtus</i>) (Sections <i>Transversaria</i> , <i>Maidenaria</i> , <i>Exsertaria</i>)
JP	TWF	TG/FORTU(proj.4)	Kumquat	Kumquat	Kumquat	Kumquat	<i>Fortunella</i> Swingle
NZ	TWO	TG/HEBE(proj.5)	Hebe	Veronique	Strauchveronika	Verónica	<i>Hebe</i> Comm. ex Juss.
CA	TWO	TG/LOBEL(proj.4)	Lobelia, True Lobelia of Gardens	Lobélie, Lobélie des jardins	Lobelia, Männertreu	Lobelia	<i>Lobelia alsinoides</i> Lam.; <i>Lobelia erinus</i> L.; <i>Lobelia valida</i> L. Bolus; Hybrids between <i>Lobelia erinus</i> and <i>Lobelia alsinoides</i> ; Hybrids between <i>Lobelia erinus</i> and <i>Lobelia valida</i>
AU	TWO	TG/LOMAN(proj.5)	Lomandra, Mat Rush	Lomandra	Lomandra	Lomandra	<i>Lomandra</i> Labill.
CN	TWO	TG/PAEON(proj.7)	Tree peony, Yellow Tree Peony	Pivoine arbustive	Delavays Strauchpfingstrose, Gelbe Pfingstrose		<i>Paeonia delavayi</i> Franch.
							<i>Paeonia jishanensis</i> T. Hong & W. Z. Zhao
							<i>Paeonia ludlowii</i> (Stern & Taylor) D. Y. Hong
							<i>Paeonia ostii</i> T. Hong & J. X. Zhang
							<i>Paeonia qiui</i> Y. L. Pei & D. Y. Hong
							<i>Paeonia rockii</i> (S. G. Haw & Lauener) T. Hong & J. J. Li ex D. Y. Hong
							<i>Paeonia suffruticosa</i> Andrews, <i>Paeonia moutan</i> Sims
ES	TWF	TG/PGRAN(proj.5)	Pomegranate	Grenadier	Granatapfel	Granado	<i>Punica granatum</i> L.
FR	TWF	TG/PINEAP(proj.12)	Pineapple	Ananas	Ananas	Piña	<i>Ananas comosus</i> (L.) Merr.
KR	TWV	TG/PLEUR(proj.5)	Oyster Mushroom	Pleurote en coquille	Austernseitling, Drehling	Champifión ostra, Gírgola, Seta de ostra	<i>Pleurotus ostreatus</i> (Jacq.) P. Kumm.
			Eringi, King Oyster Mushroom		Kräuterseitling	Seta de cardo	<i>Pleurotus eryngii</i> (DC.) Quél.
			Lung Oyster Mushroom			Pleuroto pulmonado, Pleuroto de verano	<i>Pleurotus pulmonarius</i> (Fr.) Quél.
IL/KR	TWA	TG/SESAME(proj.10)	Sesame	Sésame	Sesam	Ajonjolí, Sésamo	<i>Sesamum indicum</i> L.

**	TWP	Document No. N° du document Dokument-Nr. No del documento	English	Français	Deutsch	Español	Botanical name Nom botanique Botanischer Name Nombre botánico
CN	TWA	TG/SETARIA(proj.8)	Foxtail Millet, Italian Millet, Hungary Millet	Millet d'Italie, Millet des oiseaux, Setaire d'Italie	Italienhirse, Kolbenhirse	Dana, Mijo de cola de zorro, Mijo de Hungria	<i>Setaria italica</i> L., <i>Setaria italica</i> (L.) P. Beauv.
NL	TWV	TG/TOM_ROOT (proj.5)	Tomato Rootstocks	Porte-greffe de tomate	Tomatenunterlagen	Portainjertos de tomate	<i>Solanum lycopersicum</i> L. x <i>Solanum habrochaites</i> S. Knapp & D.M. Spooner; <i>Solanum lycopersicum</i> L. x <i>Solanum peruvianum</i> (L.) Mill.; <i>Solanum lycopersicum</i> L. x <i>Solanum cheesmaniae</i> (L. Ridley) Fosberg
REVISIONS OF TEST GUIDELINES							
ES	TWA	TG/32/7(proj.5)	Common Vetch	Vesce commune	Saatwicke	Veza común	<i>Vicia sativa</i> L.
NL	TWO	TG/108/4(proj.8)	Gladiolus	Glaïeul	Gladiole	Gladiolo	<i>Gladiolus</i> L.
NL	TWV	TG/118/5(proj.4)	Endive	Chicorée frisée, Chicorée scarole	Endivie	Escarola	<i>Cichorium endivia</i> L.
NL	TWV	TG/142/5(proj.5)	Watermelon	Melon d'eau; Pastèque	Wassermelone	Sandía	<i>Citrullus lanatus</i> (Thunb.) Matsum. et Nakai, <i>Citrullus</i> <i>vulgaris</i> Schrad.
DE	TWO	TG/176/5(proj.4)	Osteospermum; -	Ostéospermum; -	Osteospermum; Osteospermum, Kapmargerite, Kapkörbchen	Osteospermum; -	<i>Osteospermum</i> L.; hybrids with <i>Dimorphotheca</i> Vaill. ex Moench
NL	TWO	TG/213/2(proj.7)	Phalaenopsis	Phalaenopsis	Phalaenopsis	Phalaenopsis	<i>Phalaenopsis</i> Blume
PARTIAL REVISIONS OF TEST GUIDELINES							
ZA	TWO	TG/266/1 Rev. (TC/49/2 Rev.2, TC/49/37)	African lily, Agapanthus, Blue lily, Lily of the Nile	Agapanthe, Fleur d'amour	Agapanthus, Schmucklilie	Agapando, Agapanto, Estrella de mar	<i>Agapanthus</i> L'Hér
FR/NL	TWV	TG/13/10 Rev. (TC/49/2 Rev.2, TC/49/38)	Lettuce	Laitue	Salat	Lechuga	<i>Lactuca sativa</i> L.
NL	TWV	TG/55/7 Rev. (TC/49/2 Rev.2, TC/49/39)	Spinach	Épinard	Spinat	Espinaca	<i>Spinacia oleracea</i> L.
QZ	TWV	TG/44/11 Rev. (TC/49/2 Rev.2, TC/49/40)	Tomato	Tomate	Tomate	Tomate	<i>Solanum lycopersicum</i> L.

146. With regard to the draft Test Guidelines for Opium/Seed Poppy (document TG/166/4 proj.4), on the basis of the recommendation of the TC-EDC, the TC agreed that the technical issues concerning those draft Test Guidelines, as set out in Annex II to document TC/49/41, should be referred back to the TWV for further consideration.

Additional Characteristics

147. The TC agreed that a draft revision of document TGP/5 Section 10 be presented for consideration by the TC at its fiftieth session, subject to the conclusion of discussions on disclaimers on UPOV documents in the Consultative Committee.

Corrections to Test Guidelines

148. The TC noted the correction made to the Test Guidelines for Japanese Plum (document TG/84/4 Corr.), as set out in paragraph 15 of document TC/49/2 Rev.2.

Draft Test Guidelines Discussed by the Technical Working Parties in 2012

149. The TC noted the draft Test Guidelines discussed by the Technical Working Parties at their sessions in 2012, as listed in Annex II to document TC/49/2 Rev.2.

Draft Test Guidelines to be discussed by the Technical Working Parties in 2013

150. The TC agreed the program for the development of new Test Guidelines and for the revision of Test Guidelines, as shown in Annex III to document of TC/49/2 Rev.2. The TC noted that in addition to the Test Guidelines listed in Annex III to document of TC/49/2 Rev.2, the TWV would also consider the draft Test Guidelines for Opium/Seed Poppy, as explained in paragraph 146 above.

151. The TC noted the status of the existing Test Guidelines as listed in Annex IV to document TC/49/2 Rev.2.

Test Guidelines on the UPOV Website

152. The TC noted the list of adopted Test Guidelines that had since been replaced, as presented in Annex V to document TC/49/2 Rev.2.

153. The TC agreed that a draft cover page for all previous adopted versions of Test Guidelines and of a disclaimer for UPOV session documents be presented for consideration by the TC at its fiftieth session, in accordance with the conclusions of discussions on those matters by the Consultative Committee.

154. The TC agreed to add a column for date of adoption of Test Guidelines to the list of Test Guidelines on the UPOV website (see document TC/49/41 "Report on the Conclusions", paragraphs 148 to 157).

List of Genera and Species for which Authorities have Practical Experience in the Examination of Distinctness, Uniformity and Stability

155. The TC noted the information provided in document TC/49/4 and heard that the number of genera and species for which members of the Union had practical experience was 2,589 in 2013. However, the Office of the Union was investigating possible additional information which might lead to a revision in the near future.

156. The TC agreed that document TC/49/4 should be updated for the fiftieth session of the TC. The TC agreed that the purpose and value of document TC/49/4 should be explained in future versions of the document (see document TC/49/41 "Report on the Conclusions", paragraph 158 and 159).

Program for the fiftieth session

157. The following draft agenda was agreed for the fiftieth session of the TC, to be held in Geneva in 2014:

1. Opening of the session
2. Adoption of the agenda
3. Discussion on:
 - (a) Improving the effectiveness of the Technical Committee, Technical Working Parties and preparatory workshops
 - (b) Opportunities for training in the examination of DUS
 - (c) Cooperation with breeders in the examination of DUS
4. 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)
5. 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. Matters arising from the Technical Working Parties
7. TGP documents
8. Molecular techniques

9. Variety denominations
10. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
11. Assessing uniformity by off-types on the basis of more than one sample or sub-samples
12. Preparatory workshops
13. Test Guidelines
14. List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability
15. Program for the fifty-first session
16. Adoption of the report on the conclusions (if time permits)
17. Closing of the session

158. The TC agreed that the fiftieth session should be held over three days: Monday morning to Wednesday afternoon. It agreed that the discussions under agenda item 3 should be organized for Wednesday morning. The TC agreed that the TWP chairpersons should be invited to make a visual presentation under agenda item 5 in the same way as for the forty-ninth session. It agreed that the TC-EDC should hold a two-day meeting in January 2014 (see document TC/49/41 "Report on the Conclusions", paragraphs 160 and 161).

Chairperson and Vice-chairperson

159. The TC noted that the chairmanship of Mr. Joël Guiard (France) would expire with the closing of the forthcoming ordinary session of the Council in October. It proposed to the Council that it elect Mr. Alejandro Barrientos-Priego (Mexico) as new Chairperson and Mr. Kees Van Ettehoven (Netherlands) as new Vice-Chairperson of the TC for the forthcoming three-year term (see document TC/49/41 "Report on the Conclusions", paragraph 162).

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 IN 2012

160. The following reports were made by the Chairpersons on the work of the TWA, TWC, TWF, TWO, TWV, and BMT at the forty-ninth session of the TC.

Technical Working Party for Agricultural Crops (TWA)

161. The TWA held its forty-first session in Angers, France, from May 21 to 25, 2012, under the chairmanship of Mrs. Robyn Hierse (South Africa), Chairperson of the TWA. The report of the meeting is provided in document TWA/41/34 "Report".

162. The session was attended by 53 participants from 28 members of the Union, one observer State, two organizations plus three electronic participants, two from Australia and one from the World Intellectual Property Organization (WIPO). The Preparatory Workshop was held on the afternoon of May 20 and was attended by 25 participants from 14 members of the Union.

163. The TWA was welcomed by Mr. Robert Tessier, *Sous-Directeur de la Qualité et de la protection des végétaux, Ministère de l'agriculture et de la pêche*, and received presentations from Mrs. Sylvie Dutartre, Director of the *Groupe d'étude et de contrôle des variétés et des semences (GEVES)*, Mr. Georges Sicard, Head of the Variety Testing Department of GEVES, and Ms. Virginie Bertoux, Head of *Instance nationale des obtentions végétales (INOV)*.

164. The TWA noted that the information on developments in plant variety protection from members and observers was provided in document TWA/41/31 "Reports on Development in Plant Variety Protection from

Members and Observers". That was followed by a presentation from the Office of the Union on the latest developments within UPOV. After the reports, the TWA noted the information on developments in UPOV on molecular techniques, which is provided in document TWA/41/2 "Molecular Techniques".

165. A number of TGP documents were discussed: TGP/7 "Development of Test Guidelines", TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability" and TGP/14 "Glossary of Terms Used in UPOV Documents".

166. With regard to the revision of TGP/7, the TWA considered document TWA/41/11 "Summary of Revisions Agreed for Document TGP/7 'Development of Test Guidelines'" and agreed that, as proposed in the Annex to document TWA/41/11, document TGP/7: GN 7 should be amended.

167. The TWA received a presentation by the expert from Germany based on document TWA/41/12 "Guidance on the Number of Plants to be Examined for Distinctness". The following documents were also considered: TWA/41/13 "Guidance for Method of Observation", TWA/41/14 "Example Varieties" and TWA/41/15 "Providing Photographs with the Technical Questionnaire". Several proposals and comments were made and noted.

168. With regard to document TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability", several documents were given consideration. The TWA also received presentations on several of these documents.

169. An expert from Germany made a presentation regarding document TWA/41/16 "Revision of Document TGP/8 Part I, DUS Trial Design and Data Analysis, New Section 2 – Data to be Recorded"; an expert from France made a presentation regarding document TWA/41/17 "Revision of Document TGP/8 Part II: Techniques Used in DUS Examination, New Section: Guidance of Data Analysis for Blind Randomized Trials"; an expert from the United Kingdom made a presentation on document TWA/41/21 Corr. "Revision of Document TGP/8 Part II: Techniques Used in DUS Examination, New Section: Reduction of size of the trial", and an expert from the Netherlands made a presentation on document TWA/41/24 "Revision of Document TGP/8 Part I, DUS Trial Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers". The information provided in those documents was discussed and certain proposals and recommendations were made.

170. The TWA also considered the documents covering the revision of document TGP/14 "Glossary of Terms Used in UPOV Documents" and agreed with the proposed text, as presented in Annex I to document TWA/41/27 "Revision of Document TGP/14: Section 2 : Botanical Terms, Subsection 2: Shapes and Structures," concerning the perspective from which to observe plant shapes. The TWA agreed with the definitions for peduncle, pedicel, petiole and petiolule and recommended that the translations of these terms be checked. With regard to the revision of "components of shape: states of expression for ratios", the TWA recommended that it would be more appropriate to use the states "small" to "large" instead of "low" to "high" when considering the length/width ratio. The TWA considered the guidance on the use of composite characteristics for determining distinctness and uniformity contained in Annex V to document TWA/41/27 and agreed that the presented method was useful and recommended its inclusion in document TGP/14.

171. The TWA noted the information provided in document TWA/41/10 "Method for Calculation of COYU" and document TWA/41/9 "Assessment of Uniformity by Off-Types on the Basis of More Than one Sample or Sub-Samples", as well as the developments with regard to variety denominations (document TWA/41/4 "Variety Denominations") and information and databases provided in the documents: TWA/41/6 "Variety Description Databases", TWA/41/7 "Exchangeable Software" and TWA/41/8 "Electronic Application Systems".

172. The TWA received a presentation on the PLUTO database and noted the information provided in document TWA/41/5 "UPOV Information Databases".

173. With regard to agenda item 13, Guidance for drafters of Test Guidelines, the TWA received a presentation on the project for a web-based Test Guidelines Template (TG Template) in order to introduce the project to the drafters of Test Guidelines. The TWA noted the features of the proposed TG Template and discussed the possible use of such a template and related databases. The TWA supported the initiative and agreed to the continuation of the work on the TG Template.

174. The TWA discussed 14 draft Test Guidelines and agreed to submit to the TC three of those Test Guidelines, namely, Common Vetch, Foxtail Millet and Sesame.

175. The TWA agreed to discuss the following draft Test Guidelines at its forty-second session:

- Adlay (*Coix ma-yuen* Roman.)
- Adzuki/Red bean (*Vigna angularis*)
- Cassava (*Manihot esculenta* Crantz.)
- Groundnut (*Arachis* L.) (Revision)
- Kentucky Bluegrass (*Poa pratensis* L.) (Revision)
- Rhodesgrass (*Chloris gayana* Kunth)
- Scorpion Weed (*Phacelia tanacetifolia* Benth.)
- Solanum tuberosum subsp. Andigenum
- Sorghum (*Sorghum bicolor* L.) (Revision)
- Tall wheatgrass (*Elytrigia elongata* (Host) Nevski), (*Agropyron elongatum* (Host) P. Beauv.)
- *Urochloa* (*Brachiaria*)
- Wheat (*Triticum aestivum*) (Revision)

176. At the invitation of Ukraine, the TWA agreed to hold its forty-second session in Kyiv, from June 17 to 21, 2013, with the Preparatory Workshop on June 16, 2013.

177. The TWA proposed to consider the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
 - (a) Reports from members and observers
 - (b) Reports on developments within UPOV
4. Molecular techniques
5. TGP documents
6. Variety denominations
7. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
8. Uniformity assessment
9. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
10. Discussion on draft Test Guidelines (Subgroups)
11. Recommendations on draft Test Guidelines
12. Guidance for drafters of Test Guidelines
13. Date and place of the next session
14. Future program
15. Report on the session (if time permits)
16. Closing of the session

178. On the afternoon of May 23, 2012, the TWA visited the technical unit of GEVES in L'Anjouère. The TWA visited the greenhouse and field trials for oilseed rape and cereals, where explanations were provided on the conduct of trials and collection management.

Technical Working Party on Automation and Computer Programs (TWC)

179. The TWC held its thirtieth session in Chisinau, Republic of Moldova, from June 25 to 29, 2012, under the chairmanship of Mr. Sami Markkanen (Finland), Chairman of the TWC.

180. The TWC session was attended by 51 participants from 20 members of the Union. The Preparatory Workshop was held during the afternoon of Monday, June 25, and was attended by 26 participants from seven members of the Union. 46 documents were discussed during the meeting.

181. The TWC was welcomed by Mr. Viorel Gutu, Vice Minister of the Ministry of Agriculture and Food Industry of the Republic of Moldova. Mrs. Svetlana Munteanu, Deputy Director General of the State Agency on Intellectual Property, also welcomed the participants. Mr. Mihail Machidon, Chairman of the State Commission on Plant Varieties Testing (SCPVT), made a presentation on the PVP system in the Republic of Moldova.

182. The TWC considered 14 documents on the revision of document TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability".

Documents for TGP/8 Part I: DUS Trial Design and Data Analysis

183. The TWC considered document TWC/30/16 Rev. "Data to be recorded" and agreed that the document be submitted to the TC for approval after the recommended degrees of freedom in the tables in the Annex had been updated. Some minor amendments to the text were also suggested.

184. The TWC recommended that the new section "Minimizing the Variation due to Different Observers" in document TWC/30/24 should also be submitted for consideration by the TC.

185. The TWC agreed that the last title in document TWC/30/21 "Reduction of Size of Trials" should be changed to refer to technical details and an example given. The TWC also requested the drafter to include a sentence in the beginning of the Chapter stating that the "chapter is of relevance to the reader interested in technical details".

Documents for TGP/8 Part II: Techniques Used in DUS Examination

186. The TWC considered the questions from other Technical Working Parties (TWPs) concerning document TWC/30/23 "The Combined-Over-Years Criteria (COYD)". The TWC clarified that the proposal to reduce the minimum degrees of freedom provided suitable statistical methods for smaller trials, even though 20 degrees of freedom was preferable. The TWC also considered that the diagram on page 39 of document TGP/8/1 concerning requirements for statistical methods for distinctness assessment did not need to be changed. This diagram was consistent with the proposed changes in degrees of freedom.

187. The TWC also agreed that document TWC/30/20 "Adapting COYD to Special Circumstances" should be included in document TGP/8. Concerning document TWC/30/22 "2x1% Method – Minimum Number of Degrees of Freedom for the 2x1% Method", the TWC clarified that the COYD method was preferable over the 2x1% method for assurance that the results were consistent and repeatable.

188. The TWC considered document TWC/30/26 "Minimum Number of Comparable Varieties for the Relative Variance Method". The TWC requested the drafter to check whether the remaining sections were already covered under TGP/8/1. With regard to document TWC/30/28 on "New Section 11 – Examining DUS in Bulk Samples", the TWC stated that this guidance would be useful for determination of substances content and electrophoresis.

189. A presentation of the various methods used for transformation of measurements into notes for variety descriptions was made by the Office of the Union. The TWC agreed that experts from Finland, Italy and the United Kingdom should support the Office of the Union to summarize the different approaches for further development of common guidance on data processing for the assessment of distinctness and for producing variety descriptions. The TWC further agreed that experts from France, Germany and the United Kingdom would prepare a survey on the processing of a common data set to produce variety descriptions. The aim of this survey would be to determine aspects in common and where there was divergence among the methods.

190. After discussing document TWC/30/17 "Guidance of Data Analysis for Blind Randomized Trials", the TWC recommended that it should be made more general so as to apply to all possible users. Further guidance provided by the document should include information on the number of replications to ensure that correct labeling of the variety by chance would not be likely.

191. The TWC agreed that document TWC/30/18 "Guidance for Development of Variety Descriptions" should be further developed. The TWC considered the issues arising from diverging notes and suggested that the document should be revised in order to cover all methods used by members of the Union.

192. After considering document TWC/30/29 "Statistical Methods for Visually Observed Characteristics", the TWC hoped to have new examples for the preparation of a new draft for the document.

193. The TWC took note of the information contained in document TWC/30/10 "Method of Calculation of COYU" and noted that a document on possible proposals for improvements to COYU could not be prepared for consideration by the TWC in 2012. The TWC requested experts from Denmark and the United Kingdom to continue with the preparation of the document for consideration by the TWC at its thirty-first session.

194. The TWC considered document TWC/30/9 "Assessing Uniformity by Off-Types on the Basis of More Than one Sample or Sub Samples" in conjunction with an oral presentation by an expert from Germany on the study of different approaches included in the document. The TWC noted the need for further explanation on the situations described, such as clarification of whether two growing cycles related to the use of the same sample and were carried out in the same year. The TWC agreed that more detailed information and further analysis was needed in order to give guidance on the consequences of the use of the different approaches. The TWC agreed that France, Germany and the Netherlands would present one or more concrete situations in their countries and the statistical basis of their analysis. The TWC also agreed that the statistical basis for the acceptable number of off-types in the sub-sample of 20 plants used in the context of a sample of 100 plants would be assessed by experts from France and Germany.

195. The TWC received a presentation on document TWC/30/31 "AIM: Management of Image Analysis – Experience from France" by an expert from France. AIM software is used to control the centralized and shared image analysis system in GEVES. AIM software could be made available free of charge by its developer GEVES. The TWC suggested that training on the use and the translation of this software into English would be essential for wider use. The TWC also agreed to propose that the AIM software be included in the list of exchangeable software.

196. Document TWC/30/39 "A Survey on Software and Hardware used for Image Analysis" was presented to the TWC. The survey provided information for guidance, materials needed, calibration and standardization essential for image analysis. The information provided by Finland and France would be included in the document. The TWC agreed that a draft of a new section "Examining Characteristics Using Image Analysis" would benefit from this information and agreed that experts from the Netherlands in collaboration with an expert from the European Union should prepare this document.

197. Concerning document TWC/30/34 "Updated Survey on Hand-Held Data Capture Devices", the TWC recommended that a new circular be issued by the Office of the Union to revise the information in the document.

198. The TWC considered document TWC/30/7 "Exchangeable Software". The TWC agreed that, before taking a view on the inclusion of a software on the list, clarification was needed on the conditions of availability, need for translation, training, maintenance and costs for potential users. The TWC received a presentation "Information System (IS) Used for Test and Protection of Plant Varieties in the Russian Federation" (see document TWC/30/35) by an expert from Belarus in the absence of the experts from the Russian Federation. The TWC agreed that the Information System used by the Russian Federation could be included in the list of exchangeable software, with a remark that it would be available in the Russian language.

199. The TWC received an electronic presentation via the internet of a project concept for a web-based Test Guidelines Template (TG Template) for drafters of Test Guidelines by the Office of the Union. The TWC supported the initiative and continuation of work on this project. Another electronic presentation was made by WIPO on the PLUTO database.

200. The expert from Germany provided the participants with a CD containing the latest database of TWC working documents.

201. The TWC agreed to hold its thirty-first session in Seoul, Republic of Korea, from June 4 to 7, 2013, with the Preparatory Workshop on June 3, 2013.

202. The TWC planned to discuss the following items at its thirty-first session:

1. Opening of the Session
2. Adoption of the agenda

3. Short reports on developments in plant variety protection:
 - (a) Reports from members and observers
 - (b) Reports on developments within UPOV
4. Molecular techniques
5. TGP documents
7. Variety denominations
8. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
9. Data loggers
10. Image analysis
11. Assessing uniformity by off-types on the basis of more than one sample or sub-samples
12. Development of COY
COYU: possible proposals for improvements to COYU
13. Statistical analysis of categorical data
14. Webcasting of UPOV Sessions
15. Database for researching TWC documents
16. Date and place of the next session
17. Future program

203. On the afternoon of June 28, 2012, the TWC visited the Grape and Wine Production Enterprise Chateau Vartely, in Orhei, Republic of Moldova.

Technical Working Party for Fruit Crops (TWF)

204. The TWF held its forty-third session in Beijing, China, from July 30 to August 3, 2012. The session was opened and chaired by Mrs. Carensa Petzer (South Africa), Chairperson of the TWF.

205. The TWF session was attended by 52 participants from 16 members of the Union, three observer States and one observer organization.

206. The Preparatory Workshop was attended by 25 participants from nine members of the Union and three observer States.

207. The TWF was welcomed by Mr. Zhang Yanqui, Director, General of the Bureau of Seed Management, Ministry of Agriculture, and Mr. Huang Faqiang, Deputy Director General of the Science and Technology Development Center, State Forestry Administration and Deputy Director, General of the Office of Protection of New Varieties of Plants, State Forestry Administration.

208. The TWF invited further information from TWF experts on the use of biochemical and molecular techniques in fruit crops for purposes such as variety identification, management of variety collections and other applications to be presented at its next session. The expert from France would provide more information at the next TWF meeting.

209. The TWF considered the following matters on the basis of document TWF/43/3 "TGP Documents".

TGP/7: Development of Test Guidelines

- Summary of revisions agreed for document TGP/7 "Development of Test Guidelines"
- Guidance on the number of plants to be examined (for distinctness)
- Guidance for method of observation
- Providing photographs with the Technical Questionnaire
- Example varieties

210. The TWF received a presentation on example varieties by an expert from France and proposed that a three-step approach be taken into consideration by the Leading Expert when drafting Test Guidelines.

- Step 1: to ascertain whether example varieties were necessary for a specific characteristic;
- Step 2: if considered necessary, those example varieties that could be used as common or universal references should be identified;
- Step 3: to establish whether a regional set of example varieties were necessary for the specific Test Guidelines.

211. The TWF considered document TWF/46/16 "Revision of Document TGP/8: Part I: DUS Trial Design and Data Analysis, New Section 2 : Data to be Recorded" and agreed that the document should be submitted to the TC for approval at its next session.

212. In relation to document TGP/14 "Glossary of Terms Used in UPOV Documents", the TWF considered document TWF/46/27: "Revision of document TGP/14: Section 2: Botanical Terms; Subsection 2: Shapes and Structures". With regard to the revision of "components of shape: states of expression for ratios", the TWF:

- appreciated that their earlier proposal to have all states from "compressed to elongated" had been agreed by other TWPs;
- requested that the changes proposed be consistently updated throughout document TGP/14;
- proposed that the ratio diameter/height be changed to ratio length/width to be consistent throughout document TGP/14.

213. The TWF noted the developments reported in document TWF/43/4 "Variety Denominations."

214. The TWF considered document TWF/43/19 "Webcasting of UPOV Sessions" but highlighted the limitations of electronic communication tools with large audiences when active contributions are necessary.

215. The TWF considered document TWF/43/36 "Proposal for a Partial Revision of the Test Guidelines for Mandarins" and received a presentation from Mr. Jean Maison (European Union), the coordinator of the subgroup. The experts from Spain and Morocco reported on their progress to date. The TWF noted that results obtained from the ring tests made on the basis of the agreed methodology would be presented to the TWF at its session in 2013.

216. The TWF expressed its appreciation of the work done by Mr. Jean Maison (European Union), as coordinator of the subgroup.

217. The TWF agreed that the following draft Test Guidelines should be submitted to the TC for adoption: *Fortunella* Swingle, Papaya (*Carica papaya* L.), Pineapple (*Ananas comosus* L. Merr.) and Pomegranate (*Punica granatum* L.).

218. The TWF agreed to discuss the following draft Test Guidelines at its forty-fourth session:

- Avocado rootstock (*Persea* Mill.)
- Acca (*Acca sellowiana* (Berg) Burret)
- Apple rootstocks (*Malus* Mill.) (Revision)
- Coconut (*Cocos nucifera* L.)
- Litchi (*Litchi chinensis* Sonn.)
- Mandarins (*Citrus* L. - Group 1) (Partial revision)
- Peach (*Prunus persica* (L.) Batsch) (Partial revision)
- Pecan nut (*Carya illinoensis* (Wangenh.) K. Koch)
- Prunus rootstocks (*Prunus* L.) (Revision)
- Vanilla (*Vanilla planifolia* Jacks.)
- Walnut (*Juglans regia* L.) (revision)

219. At the invitation of the expert from New Zealand, the TWF agreed to hold its forty-fourth session in Napier, New Zealand, from April 29 to May 3, with the Preparatory Workshop on April 28, 2013.

220. The TWF proposed to discuss the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
 - (a) Reports from members and observers
 - (b) Reports on developments within UPOV
4. Molecular techniques
5. TGP documents
6. Variety denominations
7. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
8. Uniformity assessment
9. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
10. Discussions on draft Test Guidelines
11. Recommendations on draft Test Guidelines
12. Guidance for drafters of Test Guidelines
13. Experience with new Types and species
14. Date and place of next session
15. Future program
16. Report on the session (if time permits)
17. Closing of the session

221. On the afternoon of August 1, 2012, the TWF visited the facilities of the Institute of Forestry and Pomology, Beijing Academy of Agriculture and Forestry Sciences, Beijing, where the TWF was welcomed by Dr. Yuzhu Wang, the Director of the Institution.

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

222. The TWO held its forty-fifth session in Jeju, Republic of Korea, from August 6 to 10, 2012. The session was chaired by Mr. Nik Hulse (Australia), Chairman of the TWO. The detailed report is provided in document TWO/45/37.

223. The meeting was attended by 60 participants, from 15 members of the Union, four observer States and two observer organizations. The Preparatory Workshop was held during the afternoon of August 5 and was attended by 34 participants.

224. The TWO was welcomed by Mr. Won-Gil Bae, Director General, Korea Seed & Variety Service (KSVS) and Mr. Young-Kook Chang, Director, Plant Variety Division, KSVS. Mr. Won-Gil Bae provided an overview of the plant variety protection system in the Republic of Korea. Mr Young-Kook Chang made a presentation on the plant variety protection activities undertaken by KSVS.

225. The TWO noted the information on developments in variety protection from members and observers provided in document TWO/45/36 Prov. "Reports on Development in Plant Variety Protection from Members and Observers". It received an oral report from the Office of the Union on the latest developments within UPOV.

226. The TWO considered document TWO/45/11 "Summary of Revisions Proposed for document TGP/7 'Development of Test Guidelines'" and agreed that Chapter 2.3 should read "The minimum quantity of plant material, to be supplied by the applicant should be: [...]".

227. The TWO considered document TWO/45/12 on “Guidance of the Number of Plants to be Examined (for Distinctness)”. The TWO proposed that the minimum number of plants should match the number necessary to observe the characteristic that required the greatest number of plants.

228. The TWO considered document TWO/45/13 on “Guidance for Method of Observation” and agreed with the TWA, TWC, TWV and TWF on the proposed text, as presented in paragraph 14 of document TWO/45/37.

229. The TWO considered documents TWO/45/14 and TWO/45/14 Add. on “Example Varieties” and agreed that the use of illustrations should be further encouraged for qualitative and pseudo-qualitative characteristics and supported the three step approach developed by the TWF, whereby the Leading Expert takes into consideration:

- Step 1: to ascertain whether example varieties were necessary for a specific characteristic;
- Step 2: if considered necessary, those example varieties that could be used as common or universal references should be identified;
- Step 3: to establish whether a regional set of example varieties were necessary for the specific Test Guidelines.

230. The TWO considered document TWO/45/15 “Revision of Document TGP/7: Guidance for Providing Photographs with the Technical Questionnaire” and suggested to revise the proposed wording for the new ASW 16, as presented in the Annex to document TWO/45/15, to read: “A representative color photograph of the variety displaying its main distinguishing feature(s) must accompany the TQ, if required by the authority. The photograph will provide a visual illustration of the candidate variety which supplements the information provided by the TQ.”

231. The TWO considered documents TWO/45/30 and TWO/45/30 Add. “Revision of Document TGP/8: Part II: Techniques Used in DUS Examination, New Section: Methods for Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions”. The documents contained a summary of different approaches for transforming means into notes for variety descriptions. The TWO agreed with the recommendation of the TWF that consideration be given to the construction of a meaningful scale of expression in the case of a limited range of available example varieties.

232. The TWO considered document TWO/45/17 “Revision of Document TGP/8: Part II: Techniques Used in DUS Examination, New Section: Guidance of Data Analysis for Blind Randomized Trials”. The TWO proposed that examples for the use of blind randomized trials for other crop types, such as ornamentals, be included in the further development of the guidance.

233. The TWO considered document TWO/45/27 “Revision of Document TGP/14: Section 2: Botanical Terms, Subsection 2: Shapes and Structures”.

234. The TWO agreed with the text in relation to Section 2: paragraph 2.8 “Perspective from which to observe plant shapes”, as set out in Annex I of document TWO/45/27, paragraph 2.8, as follows: “Where appropriate, an explanation of the perspective from which to observe the shape should be included in the Test Guidelines.”

235. The TWO agreed that, in the revision of “Components of shape: states of expression for ratios”, it would be more appropriate to use the states “very low to very high” in place of “very high to very low” when considering ratio length/width. If the characteristic ratio length/width was presented as shape, then the states would be “very compressed to very elongated” in place of “very elongated to very compressed”, with the appropriate explanation.

236. The TWO considered document TWO/45/25 regarding “Revision of document TGP/14: Section 2: Botanical Terms Subsection 3: Color” and made further comments on the draft, including the following:

- The explanation in Part 1: Introduction and 2.3.1 of TWO/45/25: Annex to read: “For describing colors of plants in Test Guidelines, it is generally the practice to look at one or more of the three elements of color, separately or in combination.”
- Part III, 3.1 to read: “The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, [the darkest color] / [the color...[location]...] is considered to be the main color.”

- Part III, 3.5.1 to include: “Variegation consists of color, color distribution and pattern. Depending on the species concerned, it may not be necessary for all components to be described.” Also, the examples for variegation from 4.2.1.8 should be moved to this section.

237. The TWO noted the information on variety description databases contained in documents TWO/45/6 and TWO/45/6 Add. “Variety Description Databases”, including the presentation provided by an expert from France, and highlighted the importance of the study in the future harmonization of variety descriptions.

238. The TWO considered document TWO/45/19 “Webcasting of UPOV Sessions” and noted that webcasting was, potentially, a useful tool for subgroup discussions.

239. The TWO noted the revision of the “Practical Guidance for Drafters (Leading Experts) of UPOV Test Guidelines”, Section “Test Guidelines for Discussion at the Technical Working Party”, presented on the basis of document TC/48/3, as available on the TG Drafters webpage. The TWO also noted that if a Leading Expert of a draft Test Guidelines could not attend a TWP session the Test Guidelines could be withdrawn from the agenda of that session.

240. The TWO received a presentation of a project concept for a web-based Test Guidelines Template (TG Template) for drafters of Test Guidelines by the Office of the Union. The TWO noted the features of the proposed TG Template and discussed possibilities on the use of such a template and related databases also for the development of national guidelines. The TWO supported the initiative and agreed to the continuation of work on the TG Template.

241. The TWO agreed that the partial revision of the Test Guidelines for African Lily (document TG/266/1), as amended by the TWO, should be put forward for adoption by the Technical Committee.

242. The TWO agreed to submit nine Test Guidelines to the Technical Committee for adoption: Dianella, Eucalyptus (part of genus only), Gladiolus (Revision), *Hebe*, Lobelia, *Lomandra*, Osteospermum, Phalaenopsis and Tree Peony. At its forty-sixth session to be held in 2013, the TWO planned to discuss 15 Test Guidelines, consisting of two revisions and 13 new Test Guidelines.

243. The TWO agreed to discuss the following draft Test Guidelines at its forty-sixth session:

- Abelia
- *Aglaonema* Schott.
- *Aloe*
- *Campanula* L.
- China Aster (*Callistephus chinensis* (L.) Nees)
- Cordyline
- Cosmos (*Cosmos* Cav.)
- Dianthus (Revision) (TG/25/9)
- Grevillea
- Hosta
- Lilac (*Syringa* L.)
- Mandevilla
- Regal Pelargonium (Revision) (TG/109/3)
- Salvia
- *Zinnia* L.

244. At the invitation of Australia, the TWO agreed to hold its forty-sixth session in Melbourne, Australia, from April 22 to 26, with the Preparatory Workshop on April 21, 2013.

245. The TWO proposed to discuss the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
 - (a) Reports from members and observers
 - (b) Reports on developments within UPOV
4. Molecular techniques

5. TGP documents
6. Variety denominations
7. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
8. Uniformity assessment
9. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
10. Discussion on draft Test Guidelines (Subgroups)
11. Recommendations on draft Test Guidelines
12. Guidance for drafters of Test Guidelines
13. Date and place of the next session
14. Future program
15. Report on the session (if time permits)
16. Closing of the session

246. On the afternoon of August 8, 2012, the TWO visited the facilities of the Kim Jeong Moon Aloe Co.Ltd., Seogwipo-si, a botanical garden and research facility for Aloe.

Technical Working Party for Vegetables (TWV)

247. The TWV held its forty-sixth session at Floriade, near the city of Venlo, Netherlands from June 11 to 15, 2012. This session was held at the World Horticultural Exposition "Floriade", a venue for the horticultural sector. The session was chaired by Mr. François Boulineau (France), Chairman of the TWV.

248. The meeting was attended by 43 participants, from 16 members of the Union and two observer organizations. The Preparatory Workshop was held during the afternoon of June 10, with training on Test Guidelines preparation, and was attended by 15 participants.

249. In accordance with the agenda, a number of TGP documents were discussed: TGP/7 "Development of Test Guidelines", TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability" and TGP/14 "Glossary of Terms Used in UPOV Documents".

250. A discussion took place on the level of uniformity for disease resistances on the basis of document TWV/46/34 "Levels of uniformity according to the state of expression of obligatory disease resistance characteristics and varieties not bred for having such disease resistance" and a presentation made by an expert from the European Union.

251. Concerning the guidance of data analysis for blind randomized trials (see document TWV/46/17 "Revision of Document TGP/8: Part II: Techniques Used in DUS Examination, New Section: Guidance of Data Analysis for Blind Randomized Trials"), the TWV noted the importance of this approach for breeders and the contribution the method made to the system. It recommended that the guidance be further developed on the basis of document TWV/46/17.

252. Concerning variety description databases (see document TWV/46/6 "Variety Description Databases"), the TWV agreed that the work on the project for Pea database should be continued and that it would be a good example for the development of similar databases for other crops. It also agreed that it would be a good basis for a future revision of the Test Guidelines for Pea with respect to grouping characteristics.

253. During the forty-sixth session of the TWV, 13 Test Guidelines were discussed. The TWV agreed to submit nine Test Guidelines to the Technical Committee: three new: Coriander, Oyster Mushroom, Tomato Rootstocks and six revisions: Endive, Lettuce, Opium/Seed Poppy, Spinach, Tomato and Watermelon.

254. The TWV agreed to discuss the following draft Test Guidelines at its forty-seventh session:

- Bottle Gourd, Calabash (*Lagenaria siceraria* (Molina) Standl.)

- Brown Mustard (*Brassica juncea* (L.) Czern)
- Cassava (*Manihot esculenta* Crantz.)
- Chives (*Allium schoenoprasum* L.) (Revision)
- Cucumber (*Cucumis sativus* L.) (Partial revision: existing disease resistance)
- *Cucurbita maxima* x *Cucurbita moschata* (Rootstocks)
- Leaf Cichory (*Cichorium intybus* L. var. *foliosum* Hegi) (Revision)
- Leaf Cichory (*Cichorium intybus* L. var. *foliosum* Hegi) (Revision)
- Lentil (*Lens culinaris* Medik.) (Revision)
- Melon (*Cucumis melo* L.) (Partial revision: existing disease resistance)
- Pea (*Pisum sativum* L.) (Partial revision: grouping characteristics)
- Sweet Pepper, Hot Pepper, Paprika, Chili (*Capsicum annuum* L.) (Partial revision: existing disease resistance)
- Witloof Chicory (*Cichorium intybus* L. partim) (Revision)

255. At the invitation of Japan, the TWV agreed to hold its forty-seventh session in Nagasaki from May 20 to 24, with the Preparatory Workshop on May 19, 2013.

256. The TWV proposed to consider the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
 - (a) Reports from members and observers
 - (b) Reports on developments within UPOV
4. Molecular techniques
5. TGP documents
6. Variety denominations
7. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
8. Uniformity assessment
9. Levels of Uniformity According to the State of Expression of Obligatory Disease Resistance Characteristics and Varieties not bred for having such Disease Resistance (document to be prepared by the European Union)
10. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
11. Discussion on draft Test Guidelines (Subgroups)
12. Recommendations on draft Test Guidelines
13. Guidance for drafters of Test Guidelines
14. Date and place of the next session
15. Future program
16. Report on the session (if time permits)
17. Closing of the session

257. On the afternoon of June 13, 2012, the TWV visited the facilities of Nunhems Netherlands B.V., the vegetable and seed business of Bayer CropScience, in Nunhem. The TWV was welcomed by Mr. Uwe Dijkshoorn, Brand Manager, and visited several stations including the processing center, seed conditioning, osmopriming, pelleting and coating areas. It also received information on the asparagus breeding work of Nunhems.

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

258. No session of the BMT was held between the forty-eighth and forty-ninth sessions of the TC.

259. *The Council is invited to:*

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

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

[Annex follows]

C/47/10
ANNEX

Ref.	Title of document	Current approved* documents	2012						2013						2014					
			TC-EDC	TC/48	CAJ/65	TWPs	CAJ/66	C/46	TC-EDC	TC/49	CAJ/67	TWPs	CAJ/68	C/47	TC-EDC	TC/50	CAJ/69	TWPs	CAJ/70	C/48
TGP/0	List of TGP Documents and Latest Issue Dates	TGP/0/5 ADOPTED						TGP/0/5 Draft 1 Adopt						TGP/0/6 Draft 1 Adopt						TGP/0/7 Draft 1 Adopt
TGP/1	General Introduction with Explanations	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TGP/2	List of Test Guidelines Adopted by UPOV	TGP/2/1 ADOPTED																		
TGP/3	Varieties of Common Knowledge	C(Extr.)/19/2 Rev.																		
TGP/4	Constitution and Maintenance of Variety Collections	TGP/4/1 ADOPTED																		
TGP/5	Experience and Cooperation in DUS Testing	ADOPTED																		
TGP/6	Arrangements for DUS Testing	TGP/6/1 ADOPTED																		
TGP/7	Development of Test Guidelines	TGP/7/3 ADOPTED	see Appendix I						see Appendix I						see Appendix I					
TGP/8	Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability	TGP/8/1 ADOPTED	see Appendix II						see Appendix II						see Appendix II					
TGP/9	Examining Distinctness	TGP/9/1 ADOPTED																		
TGP/10	Examining Uniformity	TGP/10/1 ADOPTED																		
TGP/11	Examining Stability	TGP/11/2 ADOPTED																		
TGP/12	Guidance on Certain Physiological Characteristics	TGP/12/2 ADOPTED	TGP/12/2 Draft 1	TGP/12/2 Draft 2	TGP/12/2 Draft 2			TGP/12/2 Draft 3 / Adopt												
TGP/13	Guidance for New Types and Species	TGP/13/1 ADOPTED																		
TGP/14	Glossary of Terms Used in UPOV Documents	TGP/14/1 ADOPTED	(Color Subsection & revisions)	(Color Subsection & revisions)	---	(Color Subsection & revisions)	---	---	(Color Subsection & revisions)	(Color Subsection & revisions)	(Color Subsection & revisions)	---	---	TGP/14/2 Adopt						
TGP/15	Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)		TGP/15/1 Draft 1	TGP/15/1 Draft 2	TGP/15/1 Draft 2	---	---	---	TGP/15/1 Draft 3	TGP/15/1 Draft 4	TGP/15/1 Draft 4	---	---	TGP/15/1Draft 5 Adopt						

[Appendices follow]

C/47/10
APPENDIX I

Title of document	2012					2013						2014					
	TWA/41	TWV/46	TWC/30	TWF/43	TWO/45	TC-EDC	TC/49	CAJ/67	TWPs	CAJ/68	C/47	TC-EDC	TC/50	CAJ/69	TWPs	CAJ/70	C/48
TGP/7: DEVELOPMENT OF TEST GUIDELINES																	
Revisions of TGP/7 on which the TC has previously reached a conclusion	TWA/41/11	TWV/46/11	TWC/30/11	TWF/43/11	TWO/45/11	TC-EDC/Jan/13/3	TC/49/16							x			TGP/7/4 Adopt
Revision of TGP/7: Guidance on number of plants to be examined (for distinctness) <i>(Drafter: expert from Germany)</i>	TWA/41/12	TWV/46/12	TWC/30/12	TWF/43/12	TWO/45/12	TC-EDC/Jan/13/4	TC/49/17							x			TGP/7/4 Adopt
Revision of TGP/7: Guidance for method of observation <i>(Drafter: Office of the Union)</i>	TWA/41/13	TWV/46/13	TWC/30/13	TWF/43/13	TWO/45/13	TC-EDC/Jan/13/5	TC/49/18							x			TGP/7/4 Adopt
Revision of document TGP/7: Example varieties <i>(Drafter: expert from France)</i>	TWA/41/14 TWA/41/14 ADD.	TWV/46/14 TWV/46/14 ADD.	TWC/30/14 TWC/30/14 ADD.	TWF/43/14 TWF/43/14 ADD.	TWO/45/14 TWO/45/14 ADD.	TC-EDC/Jan/13/6	TC/49/19		x			x	x	x			TGP/7/4 Adopt
Revision of document TGP/7: Providing photographs with the technical questionnaire <i>(Drafter: expert from the European Union)</i>	TWA/41/15	TWV/46/15	TWC/30/15	TWF/43/15	TWO/45/15	TC-EDC/Jan/13/7	TC/49/20		x			x	x	x			TGP/7/4 Adopt
New Proposals									x			x	x		x		

[Appendix II follows]

C/47/10
APPENDIX II

Title of document	2012					2013						2014					
	TWA/41	TWV/46	TWC/30	TWF/43	TWO/45	TC-EDC	TC/49	CAJ/67	TWPs	CAJ/68	C/47	TC-EDC	TC/50	CAJ/69	TWPs	CAJ/70	C/48
TGP/8 PART I: DUS TRIAL DESIGN AND DATA ANALYSIS																	
New Section 2 - Data to be recorded (Drafter: Mr. Uwe Meyer (Germany))	TWA/41/16	TWV/46/16	TWC/30/16	TWF/43/16	TWO/45/16	TC-EDC/ Jan/13/8	TC/49/21							x			TGP/8/2 Adopt
New Section 3 - Minimizing the variation due to different observers (Drafter: Mr. Gerie van der Heijden (Netherlands))	TWA/41/24	TWV/46/24	TWC/30/24	TWF/43/24	TWO/45/24	TC-EDC/ Jan/13/9	TC/49/22		x			x	x	x			TGP/8/2 Adopt
New Section - Reduction of size of the Trials (Drafter: Mrs. Sally Watson (United Kingdom))	TWA/41/21 Corr.	TWV/46/21	TWC/30/21	TWF/43/21	TWO/45/21	TC-EDC/ Jan/13/10	TC/49/23							x			TGP/8/2 Adopt
TGP/8 PART II: TECHNIQUES USED IN DUS EXAMINATION																	
Section 3 - The Combined-Over-Years Criteria for Distinctness (COYD) (Drafter: Mrs. Sally Watson (United Kingdom))	TWA/41/23	TWV/46/23	TWC/30/23	TWF/43/23	TWO/45/23	TC-EDC/ Jan/13/11	TC/49/24							x			TGP/8/2 Adopt
Section 3, Subsection 3.6 - Adapting COYD to special circumstances (Drafter: Adrian Roberts (United Kingdom))	TWA/41/20	TWV/46/20	TWC/30/20	TWF/43/20	TWO/45/20	TC-EDC/ Jan/13/12	TC/49/25							x			TGP/8/2 Adopt
Section 4 – 2x1 % Method - Minimum number of degrees of freedom for the 2x1% Method (Drafter: Mrs. Sally Watson (United Kingdom))	TWA/41/22	TWV/46/22	TWC/30/22	TWF/43/22	TWO/45/22	TC-EDC/ Jan/13/13	TC/49/26							x			TGP/8/2 Adopt
Section 10 – Minimum number of comparable varieties for the Relative Variance Method (Drafter: Nik Hulse (Australia))	TWA/41/26	TWV/46/26	TWC/30/26	TWF/43/26	TWO/45/26	TC-EDC/ Jan/13/14 Rev.	TC/49/27		x			x	x	x			TGP/8/2 Adopt
New Section 11 - Examining DUS in bulk samples (Drafter: Mr. Kristian Kristensen (Denmark))*	TWA/41/28	TWV/46/28	TWC/30/28	TWF/43/28	TWO/45/28	TC-EDC/ Jan/13/15 Rev.	TC/49/28		x			x	x		x		
New Section - Examining characteristics using Image Analysis (Drafter: The Netherlands, European Union)			TWC/30/39			TC-EDC/ Jan/13/26	TC/49/33		x			x	x		x		
New Section 13 – Data processing for the assessment of distinctness and for producing variety descriptions (Drafter: Office of the Union)	TWA/41/30	TWV/46/30	TWC/30/30	TWF/43/30	TWO/45/30	TC-EDC/ Jan/13/16	TC/49/29		x			x	x		x		
New Section - Guidance of data analysis for blind randomized trials (Drafter: France)	TWA/41/17	TWV/46/17	TWC/30/17	TWF/43/17	TWO/45/17	TC-EDC/ Jan/13/17	TC/49/30		x			x	x	x			TGP/8/2 Adopt
New Section - Statistical methods for visually observed characteristics (Drafter: Denmark, France and the United Kingdom)	TWA/41/29	TWV/46/29	TWC/30/29	TWF/43/29	TWO/45/29	TC-EDC/ Jan/13/19	TC/49/32				TWC						
New Section - Guidance for the development of variety descriptions ** (Drafter: the Netherlands)	TWA/41/18	TWV/46/18	TWC/30/18	TWF/43/18	TWO/45/18	TC-EDC/ Jan/13/18	TC/49/31										
New Section - Statistical Methods for Very Small Sample Sizes *** (Drafter: the Netherlands)						TC-EDC/ Jan/13/27	TC/49/34										

* to be discussed at TWPs in 2013, if data on Bulk samples are provided

** to be combine with New Section 13-Data processing for the assessment of distinctness and for producing variety description

*** no document was discussed at the TWPs in 2012 because data on very small sample size were not provided