

Technical Committee**TC/55/4****Fifty-Fifth Session
Geneva, October 28 and 29, 2019****Original:** English
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TGP DOCUMENTS*Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance***EXECUTIVE SUMMARY**

1. The purpose of this document is to provide an overview of revisions of TGP documents.

Matters for adoption by the Council in 2019

2. The TC is invited to:

(a) consider the revision of document TGP/7 “Development of Test Guidelines” (document TGP/7/7), on the basis of document TGP/7/7 Draft 1 Rev.;

(b) consider the revision of document TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability” (document TGP/8/3), on the basis of document TGP/8/4 Draft 1;

(c) consider the revision of document TGP/10 “Examining Uniformity” (document TGP/10/1,) on the basis of document TGP/10/2 Draft 1;

(d) consider the revision of document TGP/14 “Glossary of Terms Used in UPOV Documents” (document TGP/14/3), on the basis of document TGP/14/4 Draft 1;

(e) consider the revision of document TGP/15 “Guidance on the use of Biochemical and Molecular Markers in the examination of Distinctness, Uniformity and Stability (DUS)” (document TGP/15/1), on the basis of document TGP/15/2 Draft 2; and

(f) note that, in conjunction with the adoption of the revised TGP documents at the fifty-third ordinary session of the Council, the Council will be invited to adopt a revision of document TGP/0 “List of TGP documents and latest issue dates” (document TGP/0/10), on the basis of document TGP/0/11 Draft 1.

Possible future revisions of TGP documents

3. The TC is invited to note:

(g) the matters for possible future revision of documents TGP/7, TGP/8, TGP/14 and TGP/15 which will be considered under separate documents;

(h) the invitation by the United Kingdom for interested experts to get in contact for testing the new software containing the improved method of calculation of COYU;

(i) that the TWC, at its thirty-seventh session, will consider a draft replacement section for document TGP/8 on the method of calculation of COYU, and developments on this matter will be reported as an addendum to this document;

New proposals for revisions of TGP documents

4. The TC is invited to:

(j) consider the proposals by the TWF on the circumstances where changes could and could not be implemented to UPOV Test Guidelines at short notice;

(k) consider whether to revise the procedure for partial revisions of Test Guidelines, on the basis of the proposal by the TWF, as set out in paragraphs 45 to 47 of this document;

(l) consider the proposal to revise document TGP/7 to present all states of expression for quantitative characteristics in Test Guidelines, taking into account the comments by the TWPs, at their sessions in 2019, as presented in paragraphs 53 to 60 of this document; and

(m) note that the TWV agreed that the current guidance provided in UPOV documents in relation to the use of disease resistance characteristics in Test Guidelines and in DUS examination was clear and sufficient for the time being, as set out in paragraph 65 of this document.

Program for the development of TGP documents

5. The TC is invited to consider:

(o) the program for the development of TGP documents, as set out in Annex VI to this document; and

(p) the proposal to extend the coverage of this document to cover all information materials, for future sessions of the Technical Committee.

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7. The following abbreviations are used in this document:

BMT	Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular
TC:	Technical Committee
TC-EDC:	Enlarged Editorial Committee
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
TWPs:	Technical Working Parties

BACKGROUND

8. The TC, at its fifty-fourth session, held in Geneva on October 28 and 29, 2018, and the CAJ, at its seventy-fifth session, held in Geneva on October 30, 2018, approved the program for the development of TGP documents, as set out in the Annex to documents TC/54/5 Rev. and CAJ/75/13, respectively, subject to the conclusions at their sessions (see document TC/54/31 "Report", paragraph 251, and document CAJ/75/14 "Report", paragraph 13).

9. The approved TGP documents are published on the UPOV website at http://www.upov.int/upov_collection/en/.

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019

10. The following revisions of TGP documents were agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019:

Document TGP/7: Development of Test Guidelines (Revision) (document TGP/7/7 Draft 1 Rev.)

11. The TC, at its fifty-fourth session, agreed the proposals for guidance on "Duration of DUS tests" and "Procedure for the introduction of Test Guidelines" to be included in a revision of document TGP/7 "Development of Test Guidelines" (see document TC/54/31 Corr. "Report", paragraphs 210 to 212 and 217 to 220).

12. On the above basis, the TC agreed that a revision of document TGP/7/6 (document TGP/7/7 Draft 1 Rev.) should be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session.

13. The French, German and Spanish translations of the original English text have been checked by the relevant members of the Editorial Committee prior to submission of the draft of document TGP/7/7 to the Council. Document TGP/7/7 Draft 1 Rev. incorporates the amendments agreed by the TC, as presented in Annex I to this document (in revision mode), and the linguistic changes made by the relevant members of the Editorial Committee.

14. *The TC is invited to note the revision of document TGP/7 “Development of Test Guidelines” (document TGP/7/7), to be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session, on the basis of document TGP/7/7 Draft 1 Rev.*

Document TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability (Revision) (document TGP/8/4 Draft 1)

15. The TC, at its fifty-third session, held in Geneva from April 3 to 5, 2017, agreed the proposal for guidance on “Examining characteristics on the basis of bulk samples” to be included in a revision of document TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability” (see document TC/53/31 “Report”, paragraphs 113 to 116).

16. The TC, at its fifty-fourth session, agreed that the guidance in document TGP/8/2: Part II: Section 8: Subsection 8.1.7 should be replaced by a cross-reference to the new guidance on “Assessing uniformity by off-types on the basis of more than one growing cycle or on the basis of sub-samples” to be included in document TGP/10 “Examining Uniformity” (see document [TC/54/31 Corr.](#) “Report”, paragraphs 231 and 232).

17. On the above basis, the TC agreed that a revision of document TGP/8/3 (document TGP/8/4 Draft 1) should be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session.

18. The French, German and Spanish translations of the original English text have been checked by the relevant members of the Editorial Committee prior to submission of the draft of document TGP/8/4 to the Council. Document TGP/8/4 Draft 1 incorporates the amendments agreed by the TC, as presented in Annex II to this document (in revision mode), and the linguistic changes made by the relevant members of the Editorial Committee.

19. *The TC is invited to note the revision of document TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability” (document TGP/8/3), to be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session, on the basis of document TGP/8/4 Draft 1.*

Document TGP/10: Examining uniformity (Revision) (document TGP/10/2 Draft 1)

20. The TC, at its fifty-fourth session, agreed that the draft guidance on “Assessing uniformity by off-types on the basis of more than one growing cycle or on the basis of sub-samples” should be put forward for adoption by the Council for inclusion in a future revision of document TGP/10 “Examining Uniformity” (see document TC/54/31 Corr. “Report”, paragraphs 233 and 234).

21. The French, German and Spanish translations of the original English text have been checked by the relevant members of the Editorial Committee prior to submission of the draft of document TGP/10/2 to the Council. Document TGP/10/2 Draft 1 incorporates the amendments agreed by the TC, as presented in Annex III to this document, and the linguistic changes made by the relevant members of the Editorial Committee.

22. *The TC is invited to note the revision of document TGP/10 “Examining Uniformity” (document TGP/10/1), to be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session, on the basis of document TGP/10/2 Draft 1.*

Document TGP/14: Glossary of Terms Used in UPOV Documents (document TGP/14/4 Draft 1)

23. The TC, at its fifty-third session, agreed to revise document TGP/14: Section 2: Subsection 2: "Shapes and structures" to amend the grid in Example 5, Alternative 2, as presented in Annex IV to this document (see document TC/53/31 "Report", paragraph 141).

24. The TC, at its fifty-fourth session, agreed the proposed revisions of document TGP/14 "Glossary of terms used in UPOV documents" to include guidance on the factors to be considered for creating color groups for grouping of varieties and organizing the growing trial (see document TC/54/31 Corr. "Report", paragraph 244).

25. On the above basis, the TC agreed that a revision of document TGP/14/3 (document TGP/14/4 Draft 1) should be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session.

26. The French, German and Spanish translations of the original English text have been checked by the relevant members of the Editorial Committee prior to submission of the draft of document TGP/14/4 to the Council. Document TGP/14/4 Draft 1 incorporates the amendments agreed by the TC, as presented in Annex IV to this document, and the linguistic changes made by the relevant members of the Editorial Committee.

27. The TC is invited to note the revision of document TGP/14 "Glossary of Terms Used in UPOV Documents" (document TGP/14/3), be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session, on the basis of document TGP/14/4 Draft 1.

Document TGP/15 "Guidance on the use of Biochemical and Molecular Markers in the examination of Distinctness, Uniformity and Stability (DUS)" (Revision) (document TGP/15/2 Draft 2)

28. The TC, at its fifty-fourth session, agreed that the following text from document UPOV/INF/18/1 "Possible use of Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)" should be introduced in document TGP/15 "Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)" to clarify that it was the responsibility of the authority to decide on the reliability of the link between the gene and the expression of the characteristic (see document TC/54/31 Corr. "Report", paragraphs 272 and 273):

"3.1.4 In considering the model and example, as presented in Annex 1 of this document, the TC emphasized the importance of meeting the assumptions. In that regard, it clarified that it is a matter for the relevant authority to consider if the assumptions are met (see document TC/45/16 "Report", paragraph 152)."

29. The TC, at its fifty-fourth session, considered the proposal by the BMT and agreed to include an explanation in document TGP/15 that it would be the responsibility of the respective TWP and the TC to assess whether the reliability of the link between the gene and the expression of the characteristic was satisfied in order to include a method in the Test Guidelines.

30. The TC, at its fifty-fourth session, further agreed with the inclusion of a new model "Genetic selection of similar varieties for the first growing cycle: example French Bean" in document TGP/15 for using biochemical and molecular markers in the examination of Distinctness, Uniformity and Stability (DUS) on the basis of document TGP/15/2 Draft 1 revised by the TC-EDC, as set out in Annex III to document TC/54/31 Corr. "Report" (see document TC/54/31 Corr. "Report", paragraphs 290 and 291).

31. On the above basis, the TC agreed that a revision of document TGP/15/1 (document TGP/15/2 Draft 2) should be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session.

32. The French, German and Spanish translations of the original English text have been checked by the relevant members of the Editorial Committee prior to submission of the draft of document TGP/15/2 to the Council. Document TGP/15/2 Draft 2 incorporates the amendments agreed by the TC, as presented in Annex V to this document, and the linguistic changes made by the relevant members of the Editorial Committee.

33. *The TC is invited to note the revision of document TGP/15 "Guidance on the use of Biochemical and Molecular Markers in the examination of Distinctness, Uniformity and Stability (DUS)" (document TGP/15/1), be put forward for adoption by the Council at its fifty-third ordinary session, subject to the approval of the CAJ at its seventy-sixth session, on the basis of document TGP/15/2 Draft 2.*

Document TGP/0: List of TGP documents and latest issue dates (Revision) (document TGP/0/11 Draft 1)

34. The TC is invited to note that, in conjunction with the adoption of the revised TGP documents at the fifty-third ordinary session of the Council, the Council will be invited to adopt a revision of document TGP/0 "List of TGP documents and latest issue dates" (document TGP/0/10) on the basis of document TGP/0/11 Draft 1.

35. *The TC is invited to note that, in conjunction with the adoption of the revised TGP documents at the fifty-third ordinary session of the Council, the Council will be invited to adopt a revision of document TGP/0 "List of TGP documents and latest issue dates" (document TGP/0/10), on the basis of document TGP/0/11 Draft 1.*

POSSIBLE FUTURE REVISIONS OF TGP DOCUMENTS

Matters to be considered by the Technical Committee

TGP/7: Development of Test Guidelines

Characteristics which only apply to certain varieties

See document TC/55/12

TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability

The Combined-Over-Years Uniformity Criterion (COYU)

36. The TC, at its fifty-fourth session, considered document TC/54/17 "The combined-over-years uniformity criterion (COYU)" (see document TC/54/31 "Report", paragraphs 221 to 224).

37. The TC noted that the statistical development of the new method of calculation of COYU had been completed, including the establishment of the probability levels required to most closely match decisions using the current method for calculation of COYU.

38. The TC noted the invitation by the United Kingdom for interested experts to get in contact for testing the new software containing the improved method of calculation of COYU.

39. The TC noted the invitation by the TWC for the expert from the United Kingdom to draft a replacement section for document TGP/8 on the method of calculation of COYU.

40. The TWC, at its thirty-seventh session, to be held in Hangzhou, China, from October 14 to 16, 2019, will consider a draft replacement section for document TGP/8 on the method of calculation of COYU, on the basis of a document prepared by an expert from the United Kingdom. Developments on this matter at the thirty-seventh session of the TWC will be reported to the TC as an addendum to this document.

Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions
See document TC/55/13

TGP/14: Glossary of Terms Used in UPOV Documents

Color names for the RHS Colour Chart
See document TC/55/14

TGP/15: Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)

New example: Characteristic-specific marker with incomplete information on state of expression
See document TC/55/15

41. *The TC is invited to note:*

(a) *the matters for possible future revision of documents TGP/7, TGP/8, TGP/14 and TGP/15 which will be considered under separate documents;*

(b) *the invitation by the United Kingdom for interested experts to get in contact for testing the new software containing the improved method of calculation of COYU; and*

(c) *that the TWC, at its thirty-seventh session, will consider a draft replacement section for document TGP/8 on the method of calculation of COYU, and developments on this matter will be reported as an addendum to this document.*

NEW PROPOSALS FOR REVISIONS OF TGP DOCUMENTS

TGP/7: Development of Test Guidelines

Procedure for partial revision of UPOV Test Guidelines

42. The TC, at its fifty-fourth session, considered whether to revise the procedure for partial revisions of Test Guidelines, on the basis of the following proposal by the TWF, as set out in document TC/54/3, paragraph 24 (see document TC/54/31 "Report", paragraphs 221 to 224):

- to accept any new proposal for partial revision of TGs by correspondence during the course of the year between two TWP sessions, with a deadline of 2 months before the session in order to prepare the document and circulate to the experts;
- to approve the addition of partial revision of Test guidelines by correspondence, giving 4 weeks for any objections;
- as the interested experts will not have been listed during the adoption of the report under agenda item "Proposals for partial revision of Test Guidelines", it is proposed to send the document for comments to all relevant TWP experts;
- to restrict this rule only to partial revisions.

43. The TC recalled that a similar proposal had been considered at its previous session and further recalled that UPOV members could amend their own test guidelines before changes were made to UPOV Test Guidelines.

44. The TC agreed to request the TWF to clarify under which circumstances changes would need to be implemented to UPOV Test Guidelines on short notice. In particular, the TC agreed to request clarification on the type of changes that were intended to be covered by the proposed procedure and to provide specific examples.

45. The TC agreed that, if an accelerated procedure were to be accepted, proposals for partial revisions of Test Guidelines would need to be published at least two months before the session to allow sufficient time for consideration by members.

Comments by the Technical Working Party for Fruit Crops

46. The TWF, at its fiftieth session, held in Budapest, Hungary, from June 24 to 28, 2019, welcomed the possibility to revise the procedure for partial revisions of Test Guidelines, allowing the possibility for experts to make new proposals in the course of the year and encouraging international harmonization of current practice for DUS examination. As requested by the TC, the TWF agreed the accelerated procedure should apply (see document TWF/50/13 "Report", paragraphs 30 to 33):

- For proposals to delete a characteristic
- For proposals to add a new state of expression and/or add a new illustration
- For proposals to add new example varieties

47. The TWF agreed that this accelerated procedure should not be applied:

- For proposals for grouping characteristics
- For proposals to add new characteristics

48. The TWF agreed that the accelerated procedure for partial revisions of Test Guidelines should respect the agreed timetable to prepare and circulate documents before the session, to allow sufficient time for consideration by members of the Union. It further highlighted the importance for all relevant TWP experts to be invited to comment on any proposal for new partial revisions of Test Guidelines in the forthcoming session and suggested, in that regard, to include all participants of the previous TWP session in the communication.

49. *The TC is invited to consider:*

(a) the proposals by the TWF on the circumstances where changes could and could not be implemented to UPOV Test Guidelines at short notice;

(b) considered whether to revise the procedure for partial revisions of Test Guidelines, on the basis of the proposal by the TWF, as set out in paragraphs 45 to 47 of this document.

Presentation of full scale of notes for quantitative characteristics in Test Guidelines

50. All UPOV Test Guidelines contain the following explanation of the presentation of states of expression for quantitative characteristics (see document TGP/7 "Development of Test Guidelines", Annex I "TG Structure and Universal Standard Wording").

"In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

“However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

<i>State</i>	<i>Note</i>
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

51. Despite the inclusion of this explanation, there is widespread confusion and misunderstanding of the “abbreviated” scale. Furthermore, UPOV documentation, including Test Guidelines, have been made available on the UPOV website and are no longer sent as paper copies by mail to UPOV members. Therefore, the use of an abbreviated scale to minimize the size of the Table of Characteristics may no longer be appropriate. Presenting all states of expression for quantitative characteristics in the Table of Characteristics would also remove the need for special treatment of characteristics that are included in the Technical Questionnaire. A further benefit would be that all states of expression are needed for characteristics included in UPOV PRISMA. For these reasons, UPOV members may wish to consider presenting all states of expression for quantitative characteristics in Test Guidelines.

52. The TWPs, at their sessions in 2019, were invited to consider revising document TGP/7, GN 20 “Presentation of characteristics: States of expression according to type of expression of a characteristic” and Annex 1 “TG structure and universal standard wording” to present all states of expression for quantitative characteristics included in Test Guidelines.

Comments by the TWPs at their sessions in 2019

53. The TWO, TWV, TWF and TWA, at their sessions in 2019, considered the proposal to revise document TGP/7, GN 20, to present all states of expression for quantitative characteristics included in Test Guidelines (see documents TWO/51/12 “Report”, paragraphs 19 to 23, TWV/53/14 “Report”, paragraphs 12 to 16, TWF/50/13 “Report”, paragraphs 11 and 13 and TWA/48/9 “Report”, paragraphs 40 to 42).

54. The TWO, TWV and TWF agreed that all states of expression for quantitative characteristics should be presented in Test Guidelines.

55. The TWO and the TWV recalled that guidance in document TGP/7 required quantitative characteristics with “1-9” scale to have example varieties for at least three states of expression and “1-5” / “1-4” / “1-3” scales for at least two states of expression. The TWO and the TWV agreed with the proposal to present all states of expression of quantitative characteristics in Test Guidelines and agreed that this would not change the minimum number of example varieties required in document TGP/7.

56. The TWF welcomed the proposal to present the full scale of notes for QN characteristics in Test Guidelines as it would provide greater clarity for DUS examiners, in particular in the case of testing at breeders’ premises. It further agreed that it would improve the quality of the data provided.

57. The TWA considered the proposal for the revision of document TGP/7 to have all states of expression for quantitative characteristics presented in Test Guidelines and agreed that it would not be possible to reach a conclusion on the matter at this stage.

58. The TWA noted that presenting all states of expression in Test Guidelines could be useful for less experienced DUS examiners and other users of Test Guidelines, such as breeders. The TWA also noted that presenting all states of expression was important for online application systems, including national online application systems and UPOV PRISMA.

59. The TWA noted the standard explanation in Test Guidelines that in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used, although other states of expression exist to describe varieties and should be used as appropriate. The TWA noted that presenting all states of expression could increase the length of the Test Guidelines and render the document less practical to be used on the field by experienced examiners.

60. Comments by the TWC, at its thirty-seventh session, to be held in Hangzhou, China, from October 14 to 16, 2019, will be presented as an addendum to this document.

61. The TC is invited to consider the proposal to revise document TGP/7 to present all states of expression for quantitative characteristics in Test Guidelines, taking into account the comments by the TWPs, at their sessions in 2019, as presented in paragraphs 53 to 60 of this document.

TGP/12: Guidance on Certain Physiological Characteristics

Explanations on disease resistance characteristics

62. The TC, at its fifty-fourth session, considered whether to invite the TWPs to develop further guidance on providing explanations for disease resistance characteristics in Test Guidelines using the Standard Resistance Protocol provided in document TGP/12 "Guidance on certain physiological characteristics", including the elements that would not need to be completed (see document TC/54/31 "Report", paragraphs 249 and 250).

63. The TC noted that the use of disease resistance characteristics would be discussed at the TWV, at its next session, and agreed to wait for the outcome of those discussions before developing further guidance.

Consideration by the Technical Working Party for Vegetables

64. The TWV, at its fifty-third session, held in Seoul, Republic of Korea, from May 20 to 24, 2019, received the following presentations, copies of which are provided in document TWV/53/13 Rev. (see document TWV/53/14 Rev. "Revised Report", paragraphs 59 to 62):

- (a) "Use of disease resistance characteristics", presented by an expert from the European Union.
- (b) "Evaluation of disease resistance in vegetable varieties according to UPOV standards. A focus on the Italian activities", presented by an expert from Italy.
- (c) "Disease resistance in DUS", presented by experts from France and the Netherlands.
- (d) "Harmonization of resistance tests to diseases for DUS testing: Harmores 3", presented by an expert from France (on behalf of the working group).
- (e) "Disease resistance in vegetables: What does the European industry do in terms of claims?" presented by an expert from the European Seed Association (ESA).
- (f) "ISF Working Group Disease resistance terminology", presented by an expert from the International Seed Federation (ISF).

65. The TWV agreed that the current guidance provided in UPOV documents in relation to the use of disease resistance characteristics in Test Guidelines and in DUS examination was clear and sufficient for the time being. The TWV noted that in the scope of disease resistance characteristics, when using QN as type of expression, more than 3 states could be used.

66. The TWV agreed that disease resistance is an important breeding goal therefore cooperation among all stakeholders would be beneficial to ensure the development of DUS examination and Test Guidelines in line with the expectation of the users of the system.

67. The TWV agreed that disease resistance characteristics are important for DUS examination and in particular for distinctness, grouping and variety descriptions. The TWV therefore agreed that it is the responsibility of each TWP to update TGs when and if relevant, and take the appropriate time to include and/or update characteristics with an approved methodology for the assessment of the characteristics (e.g. type of expression QN/QL, common agreed terminology) and for the validated disease test protocol to be followed. In order to achieve this goal the TWV agreed that all stakeholders (i.e. DUS experts, pathologists, breeders) should be consulted/involved and sufficient time should be given to ensure that all DUS examination offices agreed before adding new disease resistance characteristics or a new disease test protocol.

68. The TC is invited to note that the TWV agreed that the current guidance provided in UPOV documents in relation to the use of disease resistance characteristics in Test Guidelines and in DUS examination was clear and sufficient for the time being, as set out in paragraph 65 of this document.

PROGRAM FOR THE DEVELOPMENT OF TGP DOCUMENTS

69. Annex VI to this document presents the program for the development of TGP documents as amended on the basis of the comments by the TWPs, at their sessions in 2019.

70. It is proposed that the coverage of this document be extended to cover all relevant information materials for future sessions of the Technical Committee.

71. The TC is invited to consider:

(a) the program for the development of TGP documents, as set out in Annex VI to this document; and

(b) the proposal to extend the coverage of this document to cover all relevant information materials, for future sessions of the Technical Committee.

[Annexes follow]

ANNEX I

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019: REVISIONS TO DOCUMENT TGP/7

The following revisions of document TGP/7 “Development of Test Guidelines” were agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019 (~~highlighting and strikethrough~~ for deletions and highlighting and underline for addition):

(i) Duration of DUS tests:*Universal Standard Wording: Section 3.1: Number of Growing Cycles*

The TC, at its fifty-fourth session, considered document TC/54/14 “Duration of DUS tests” (see document TC/54/31 “Report”, paragraphs 210 to 212).

The TC agreed that the guidance in document TGP/7 should be amended to clarify that the testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

The TC agreed that the following sentence should be included as standard wording in Test Guidelines:

“The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.”

(ii) Procedure for the adoption of Test Guidelines by correspondence*Section 2.2 “Procedure for the Introduction of Test Guidelines”*

The TC, at its fifty-fourth session, considered document TC/54/16 “Procedure for the adoption of Test Guidelines” (see document TC/54/31 “Report”, paragraphs 217 to 220).

The TC considered the proposal for the revision of document TGP/7 “Development of Test Guidelines” to reflect the introduction of a procedure for adoption of Test Guidelines by correspondence, as set out in document TC/54/16, paragraph 14, and received presentation by the UPOV Office, a copy of which was provided as an addendum to document TC/54/16. The TC agreed that guidance in document TGP/7 should be revised to read as follows:

“2.2.7 ~~STEP 7~~ Consideration of Draft Test Guidelines by the TC-EDC

“2.2.7.1 The TC-EDC has been established by the Technical Committee to examine drafts of all Test Guidelines, produced by the TWPs, before these are put forward for adoption by the Technical Committee. The role of the TC-EDC is to ensure consistency of the Test Guidelines with the requirements of document TGP/7 and to check the alignment of texts across all the official UPOV languages. It does not conduct a substantive technical review of the Test Guidelines. The members of the TC-EDC are selected by the TC, both to provide broad experience of the UPOV system and also to represent the UPOV languages – English, French, German and Spanish. The Chairperson of the TC-EDC is provided by the UPOV Secretariat.

“2.2.7.2 The TC-EDC reviews the draft Test Guidelines, taking into account any specific instructions from the Technical Committee, and makes a recommendation on whether the Test Guidelines are suitable for adoption (Step 8). It may make a proposal to the Technical Committee for adoption subject to amendments of an editorial nature, which it specifies.

~~“2.2.7.3 If it considers that there are technical issues to be resolved, the TC-EDC may seek to resolve the issues with the Leading Expert, prior to consideration of the Test Guidelines by the Technical Committee. Where this is not possible, the TC-EDC may recommend that the Technical Committee:~~

- ~~(a) refer the Test Guidelines back to the TWP (Step 4) or;~~
- ~~(b) adopt the Test Guidelines subject to further information being provided by the Leading Expert with the agreement of all interested experts and the Chairperson of the TWP concerned.~~

“NEW Unless otherwise agreed by the TC, the TC-EDC meets twice each year, once in the period March/April and once in conjunction with the TC session (October/November). The TC-EDC will consider Test Guidelines submitted by the Technical Working Parties at least 14 weeks prior to the TC-EDC meeting. Test Guidelines submitted less than 14 weeks prior to the TC-EDC meeting will be considered at its subsequent meeting.

~~"NEW~~ The potential outcomes for Test Guidelines considered by the TC-EDC are as follows:

- ~~(a) no changes required to the Test Guidelines, or strictly editorial changes for which recommendations are agreed by the TC-EDC; or~~
- ~~(b) editorial clarifications required; or~~
- ~~(c) technical issues to be resolved.~~

~~"NEW~~ In cases where no changes are required to the Test Guidelines, or strictly editorial changes for which recommendations are agreed by the TC-EDC, the Test Guidelines will be put forward for adoption by the Technical Committee.

~~"NEW~~ The following procedure applies for Test Guidelines when editorial clarifications are required:

- request for clarifications is transmitted to the Leading Expert;
- clarifications to be provided within four weeks;
- if the clarifications are agreed by the TC-EDC, the Test Guidelines will be recommended for adoption at the TC-EDC meeting;
- the Test Guidelines are considered for adoption by the TC.

~~"NEW~~ The following procedure applies for Test Guidelines with technical issues to be resolved:

- technical issues to be transmitted to the Leading Expert
- the technical issues are to be addressed at the respective Technical Working Party by means of a TWP document prepared by the Leading Expert at least four weeks before TWP session (new draft Test Guidelines should not be prepared)
- resolution of the issues to be provided to the TC-EDC at least seven weeks before the TC-EDC meeting;
- if agreed by the TC-EDC, the Test Guidelines would be recommended for adoption at the TC-EDC meeting;
- Test Guidelines are considered for adoption by the TC.

~~"2.2.8~~ **STEP 8** Adoption of Draft Test Guidelines by the Technical Committee

~~"2.2.8.1~~ The Technical Committee will, on the basis of the recommendations of the TC-EDC, decide whether to adopt the Test Guidelines, or refer them back to the TWP concerned.

~~"NEW~~ The Technical Committee may adopt Test Guidelines at its session or by correspondence. Test Guidelines may be adopted by correspondence according to the following procedure:

- The draft Test Guidelines are circulated to the TC for adoption by correspondence with the recommendations by the TC-EDC;
- The draft Test Guidelines are considered as adopted if no comments are received within six weeks;
- If any comments are received, the draft Test Guidelines are referred to the relevant TWP to address those comments.

~~"2.2.8.2~~ Where the Technical Committee adopts the Test Guidelines, the Office will make all amendments agreed by the Technical Committee, which will be recorded in a report of the relevant Technical Committee meeting. The Office will then publish the adopted Test Guidelines.

~~"2.2.8.3~~ Where the Technical Committee adopts the Test Guidelines subject to further information being provided by the Leading Expert with the agreement of all interested experts and the Chairman of the TWP concerned (see 2.2.7.3(b)), the necessary information, agreed with all interested experts, should be provided to the Office within three months of the Technical Committee meeting, or before the subsequent session of the TWP concerned, whichever is the sooner. In those cases where the necessary information is not provided within this time, the Test Guidelines concerned will not be adopted and will be re-presented at the TWP concerned (Step 4)."

The TC agreed that a suitable timeline for the publication of adopted Test Guidelines should be added to the guidance. The TC will be invited to consider a proposed timeline at its fifty-fifth session, to be held in Geneva on October 28 and 29, 2019. Subject to agreement by the TC and the CAJ, the proposed timeline will be put forward for adoption by the Council, at its session to be held on November 1, 2019.

The TC agreed that the procedure for the adoption of Test Guidelines by correspondence should be incorporated in the content of the preparatory workshops for the TWPs.

ANNEX II

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019: DOCUMENT TGP/8

The following revision of document TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability” was agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019.

Examining DUS in Bulk Samples

Document TGP/8: Part II: Selected techniques used in DUS examination: New Section 12: Examining characteristics on the basis of bulk samples

The TC, at its fifty-third session, held in Geneva from April 3 to 5, 2017, agreed a list of criteria as the basis for the development of guidance for inclusion in a future revision of document TGP/8, as follows (see document TC/53/31 “Report”, paragraphs 113 to 116):

- (a) “the characteristic should fulfill the requirements of a characteristic, as set out in the “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of new Varieties of Plants” (see document TG/1/3, Section 4.2.1);
- (b) “there should be knowledge of the genetic control of the characteristic;
- (c) “the suitability of the characteristic should be validated through an initial assessment of uniformity on individual plants;
- (d) “information on plant-by-plant variation and differences between growing cycles should be provided (data from routine measurement of the characteristic from different years);
- (e) “a full description of the method of assessment should be provided;
- (f) “states of expression should be based on existing variation between varieties considering environmental influence.”

[Annex III follows]

ANNEX III

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019: DOCUMENT TGP/10

The following revision of document TGP/1 “Examining Uniformity” was agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019.

Assessing Uniformity by Off-Types on the Basis of More than One Growing Cycle or on the Basis of Sub-Samples

The TC, at its fifty-fourth session, considered document TC/54/20 “Assessing Uniformity by Off-Types on the Basis of More than One Growing Cycle or on the Basis of Sub-Samples” (see document TC/54/31 “Report”, paragraphs 233 and 234).

The TC agreed that the following draft guidance should be put forward for adoption by the Council for inclusion in a future revision of document TGP/10 “Examining Uniformity” to provide guidance on assessing uniformity by off-types on the basis of more than one growing cycle or on the basis of sub-samples.

New Section 4.7: Assessing Uniformity by Off-Types on the Basis of More than One Growing Cycle

Two independent growing cycles could take place in a single location in different years, or in different locations in the same year, according to document TGP/8 Part I, Sections 1.2 and 1.3.

The following guidance is not intended to be used for the assessment of uniformity by off-types on the same plants in two growing cycles. Results from growing cycles using different lots of plant material should not be combined.

Approach 1: Third growing cycle in the case of inconsistent results

A variety is considered uniform if it is within the uniformity standard in both of the two growing cycles.

A variety is considered non-uniform if it fails to meet the uniformity standard in both of the two growing cycles.

If at the end of the two growing cycles the variety is within the uniformity standard in one growing cycle but is not within the uniformity standard in the other growing cycle, then uniformity is assessed in a third growing cycle. If in the third growing cycle the variety is within the uniformity standard, the variety is considered uniform. If in the third growing cycle the variety fails to meet the uniformity standard, the variety is considered non-uniform.

Care is needed 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. It is important to identify whether differences in number of off-types between growing cycles were due to environmental reasons or sampling variation.

Furthermore, if in the first growing cycle a variety exceeds a predefined upper limit of off-types the variety may be rejected after a single growing cycle.

Approach 2: Combining the results of two growing cycles in the case of inconsistent results

A variety is considered uniform if it is within the uniformity standard in both of the two growing cycles.

A variety is considered non-uniform if it fails to meet the uniformity standard in both of the two growing cycles.

If at the end of the two growing cycles the variety is within the uniformity standard in one growing cycle but is not within the uniformity standard in the other growing cycle, a variety is considered uniform if the total number of off-types at the end of the two growing cycles does not exceed the number of allowed off-types for the sample size of growing cycles 1 and 2 combined.

Care is needed 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. A statistical test for consistency should be applied when appropriate. It is important to identify whether differences in number of off-types between growing cycles were due to environmental reasons or sampling variation.

Furthermore, if in the first growing cycle a variety exceeds a predefined upper limit of off-types the variety may be rejected after a single growing cycle.

Approach 3: Combining the results of two growing cycles

A variety is considered uniform if the total number of off-types at the end of the two growing cycles does not exceed the number of allowed off-types for the combined sample.

A variety is considered non-uniform if the total number of off-types at the end of the two growing cycles exceeds the number of allowed off-types for the combined sample.

A variety may be rejected after a single growing cycle, if the number of off-types exceeds the number of allowed off-types for the combined sample (over two cycles).

Care is needed when considering results that are very different in each of the growing cycles, such as when a type of off-type is observed at a high level in one growing cycle and is absent in another growing cycle. A statistical test for consistency should be applied when appropriate. It is important to identify whether differences in number of off-types between growing cycles were due to environmental reasons or sampling variation.

Example:

Population Standard = 1%

Acceptance Probability \geq 95%

Sample Size in each of growing cycles 1 and 2 = 50
Maximum number of Off-Types = 2
Sample Size in growing cycles 1 and 2 combined = 100
Maximum number of Off-Types = 3

		Growing cycle		Decision		
		First	Second	Approach 1	Approach 2	Approach 3
Number of Off-Types	1	1	uniform	uniform	uniform	
	2	2	uniform	uniform	non-uniform	
	0	3*	third growing cycle*	uniform*	uniform*	
	1	3*	third growing cycle*	non-uniform*	non-uniform*	
	1	4*	third growing cycle*	non-uniform*	non-uniform*	
	4**	1*	third growing cycle*	non-uniform*	non-uniform*	

* Care is needed 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. A statistical test for consistency should be applied when appropriate. It is important to identify whether differences in number of off types between growing cycles were due to environmental reasons or sampling variation.

** if in the first growing cycle a variety exceeds a predefined upper limit of off-types the variety may be rejected after a single growing cycle.

New Section 4.8: Assessing uniformity by off-types on the basis of sub-samples within a single test/trial

Approach: Use of sub-sample as a first step of assessment

A variety is considered uniform if the number of off-types does not exceed a predefined lower limit in the sub-sample.

A variety is considered non-uniform if the number of off-types exceeds a predefined upper limit in the sub-sample.

If the number of off-types is between the predefined lower and upper limits, the whole sample is assessed. The lower and upper limits have to be chosen considering comparable type I and type II errors in the sub-sample and the whole sample.

Example:

In a sample size of 100 plants, the acceptable number of off-types is 3 (based on a population standard of 1% and an acceptance probability of at least 95%).

In a subsample of 20 plants used in the context of the sample size of 100 plants above:

A variety is considered uniform if no off-types are observed in the sub-sample.

A variety is considered non-uniform if the number of off-types in the sub-sample exceeds 3.

If the number of off-types is 1 to 3, the whole sample of 100 plants is assessed.

If the number of off-types in the sample of 100 plants exceeds 3, the variety is considered non-uniform.

[Annex IV follows]











ANNEX IV

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019: DOCUMENT TGP/14

The following revisions of document TGP/14 “Glossary of terms used in UPOV documents” were agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019.

(i) Illustrations for shape and ratio characteristics

72. The TC, at its fifty-third session, held in Geneva from April 3 to 5, 2017, agreed to revise document TGP/14: Section 2: Subsection 2: “Shapes and structures” to amend the grid for position of broadest part and width/ratio presented in Example 5, Alternative 2, to remove the wording on “ratio” and to display “relative width” in a separate column from the scale of “broad to narrow”, to read as follows (see document TC/53/31 “Report”, paragraph 141) (~~highlighting and strikethrough~~ for deletions and highlighting and underline for addition):

		← broadest part →					
		(below middle)	at middle	(above middle)			
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; align-items: center; margin-bottom: 5px;"> ← relative width </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> → width (ratio-length/width) </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> ← broad (low) </div> <div style="display: flex; align-items: center;"> → narrow (high) </div> </div>			 6 linear				
			 5 oblong	 8 oblanceolate	 9 spatulate		
	 1 triangular	 2 ovate	 4 elliptic	 7 obovate		 10 obtriangular	
			 3 circular				

(ii) Factors to be considered for creating color groups

73. The TC, at its fifty-fourth session, considered document TC/54/22 “Color names for the RHS Colour Chart” (see document TC/54/31 “Report”, paragraph 244).

74. The TC agreed to propose the revision of document TGP/14 to include guidance on the factors to be considered for creating color groups for grouping of varieties and organizing the growing trial, as follows:

Subsection 3: Color: New Section: 5 “Factors to be considered for creating color groups”

“When using the color of a plant part for grouping of varieties, a very clear and large difference between the colors is required. However, the color groups are also used in the Technical Questionnaire for applicants who have no RHS Colour Chart. Therefore the groups need to be small enough so that applicants are able to give an adequate state of expression for the characteristic.

“The following factors have to be considered when creating color groups for grouping:

- (a) range of variation of the color of the plant part within the species
- (b) difference between colors for varieties to be considered clearly distinguishable
- (c) possible influence of the environment on the color of the plant part.

“Depending on the species and the plant part observed the color groups for grouping can be different. Examples for color groups in grouping characteristics of different Test Guidelines are listed in the following table.

Test Guidelines	Campanula (TG/305/1)	Hosta (TG/299/1)	Cordyline (TG/317/1)	Osteospermum (TG/175/5)
Characteristic	Corolla: main color of inner side	Leaf blade: color covering the largest surface area	Leaf: secondary color	Ray floret: main color of middle part
Color groups for grouping	white pink red purple purple blue	white light yellow medium yellow dark yellow light green medium green dark green blue green	white yellow green red purple brown blackish	white yellow orange pink red purple violet

“It should be emphasized that not all groups are necessarily clearly distinct from each other when information is used that does not come from the same source (same location, same observer) and cannot always be used to exclude varieties from the trial. E.g. in Cordyline for the characteristic ‘Leaf: secondary color’ it might not be possible to clearly distinguish between ‘brown’ and ‘blackish’ when looking at photos on the internet or in a plant catalogue.”

[Annex V follows]

MATTERS FOR ADOPTION BY THE COUNCIL IN 2019: DOCUMENT TGP/15

1. The following revisions of document TGP/15 "Guidance on the use of Biochemical and Molecular Markers in the examination of Distinctness, Uniformity and Stability (DUS)" were agreed by the Technical Committee to be proposed for adoption by the Council at its fifty-third ordinary session, to be held in Geneva on November 1, 2019, subject to approval by the CAJ, at its seventy-sixth session, to be held in Geneva on October 30, 2019.

Reliability of the link between the gene and the expression of the characteristic

2. The TC, at its fifty-fourth session, agreed that the following text from document UPOV/INF/18/1 should be introduced in document TGP/15 to clarify that it was the responsibility of the authority to decide on the reliability of the link between the gene and the expression of the characteristic (see document TC/54/31 "Report", paragraphs 272 and 273):

"3.1.4 In considering the model and example, as presented in Annex 1 of this document, the TC emphasized the importance of meeting the assumptions. In that regard, it clarified that it is a matter for the relevant authority to consider if the assumptions are met (see document TC/45/16 "Report", paragraph 152)."

3. The TC considered the proposal by the BMT and agreed to include an explanation in document TGP/15 that it would be the responsibility of the respective TWP and the TC to assess whether the reliability of the link between the gene and the expression of the characteristic was satisfied in order to include a method in the Test Guidelines.

New model: "Genetic selection of similar varieties for the first growing cycle"

4. The TC, at its fifty-fourth session, agreed with the inclusion of a new model in document TGP/15, as follows (see document TC/54/31 "Report", paragraphs 290 and 291):

New Section 2.3 "Genetic Selection of Similar Varieties for the First Growing Cycle"

2.3 Genetic Selection of Similar Varieties for the First Growing Cycle (see Annex III)

2.3.1 This approach involves a step to check for genetic similarity before the first growing cycle.

2.3.2 In cases where the minimum duration of tests is normally two growing cycles, a selection of similar varieties in the variety collection for comparison with candidate varieties in the first growing cycle is made according to genetic similarity. As a next step, the information provided by the applicant in the Technical Questionnaire (TQ) is used to see if some of the genetically similar varieties do not have to be compared in a growing trial because of differences in DUS characteristics.

2.3.3 On the basis of the variety description of DUS characteristics produced in the first growing cycle, a further search is made of varieties in the variety collection to identify any similar varieties that were not compared in the first growing cycle and which should be compared with the candidate variety in the second growing cycle.

2.3.4 Annex III to this document "Genetic Selection of Similar Varieties for the First Growing Cycle" provides an example of the genetic selection of similar varieties for the first growing cycle.

Annex III "Model: Genetic Selection of Similar Varieties for the First Growing Cycle"

Example: French Bean (prepared by an expert from the Netherlands)

1. Introduction

1.1 This approach involves a step to check for genetic similarity before the first growing cycle.

1.2 In cases where the minimum duration of tests is normally two growing cycles, a selection of similar varieties in the variety collection for comparison with candidate varieties in the first growing cycle is made according to genetic similarity. As a next step, the information provided by the applicant in the

Technical Questionnaire (TQ) is used to see if some of the genetically similar varieties do not have to be compared in a growing trial because of differences in DUS characteristics.

1.3 On the basis of the variety description of DUS characteristics produced in the first growing cycle, a further search is made of varieties in the variety collection to identify any similar varieties that were not compared in the first growing cycle and which should be compared with the candidate variety in the second growing cycle.

2. Procedure

Determine genetic similarity

2.1 The DNA-profile of the candidate variety is produced as soon as plant material is received.

2.2 The DNA-profile is compared with the profiles of all varieties in the variety collection and genetically similar varieties are identified.

Technical Questionnaire information

2.3 The information provided by the applicant in the Technical Questionnaire (TQ) is then used to see if there are clear differences in DUS characteristics from some of the genetically similar varieties so that they do not need to be compared with candidate varieties in a growing trial.

Field trial

First growing cycle:

2.4 The candidate and the genetically similar varieties selected by the procedure above are grown in the same field trial. A complete description of the DUS characteristics of the candidate variety is produced and is compared to the descriptions of all varieties in the variety collection using a database containing descriptions produced at the same location in previous years.

2.5 Possible outcomes:

If the candidate variety is not distinct from the genetically similar varieties on the basis of DUS characteristics, the test will be continued for another growing cycle.

In any case, the description of the candidate variety produced in the first growing cycle is compared to the descriptions of the varieties in the variety collection using a database containing descriptions produced at the same location.

(a) If the candidate variety is found to be distinct from all varieties grown in the first growing cycle and to all other varieties in the variety collection at the end of the first growing cycle and it fulfills the uniformity and stability requirements the DUS test may be concluded after the first growing cycle.

(b) In all other cases a second growing cycle is performed.

Second growing cycle

2.6 In the second growing cycle, the candidate variety is grown with the all varieties in the variety collection from which it was not found to be distinct at the end of the first growing cycle.

2.7 At the end of the second growing cycle, an assessment of DUS is made. If it is not possible to reach a decision on DUS at the end of the second growing cycle, a further growing cycle may be conducted.

[Annex VI follows]

TC/55/4

ANNEX VI – PROGRAM FOR THE DEVELOPMENT OF TGP DOCUMENTS

Title of document	Current approved documents	2018					2019					2020					
		TC-EDC	TWPs	TC/55	CAJ/75	C/52	TC-EDC	TWPs	TC/55	CAJ/76	C/53	TC-EDC	TWPs	TC/56	CAJ/77	C/54	
TGP/0	List of TGP Documents and Latest Issue Dates	TGP/0/9 ADOPTED															TGP/0/12 Adopt
TGP/1	General Introduction with Explanations	-															
TGP/2	List of Test Guidelines Adopted by UPOV	TGP/2/2 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															
	Confidentiality of molecular information (Drafter: Office of the Union)	TGP/5 SECTION 1/2	TC-EDC/Mar18/10			x		TGP/5 S.1/3 Adopt									
TGP/6	Arrangements for DUS Testing	ADOPTED															
TGP/7	Development of Test Guidelines	TGP/7/4 ADOPTED															
	Drafter's Kit for Test Guidelines (Drafter: Office of the Union)		TC-EDC/Mar18/10			x		TGP/7/6 Adopt									
	Duration of tests (Drafter: Office of the Union)		TC-EDC/Mar18/12	TWP/2/9	TC/54/14							CAJ/76/5	TGP/7/7 Adopt				
	Characteristics which only apply to certain varieties (Drafter: Office of the Union)		TC-EDC/Mar18/13		TC/54/15			TC-EDC/Mar19/9	TWP/3/9	TC/55/12			X	X	X	CAJ/76/5	TGP/7/8 Adopt
	Procedure for the adoption of Test Guidelines by correspondence (Drafter: Office of the Union)		TC-EDC/Mar18/10		TC/54/16							CAJ/76/5	TGP/7/7 Adopt				
TGP/8	Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability	TGP/8/2 ADOPTED															
	Method of Calculation of COYU (Drafter: Adrian Roberts (GB))		TC-EDC/Mar18/14	TWC/36/4	TC/54/17				TWC	TC/55/4			X	X	X	CAJ/76/5	TGP/8/5 Adopt
	Examining DUS in Bulk Samples (Drafter: Office of the Union)											CAJ/76/5	TGP/8/4 Adopt				
	Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions (Drafter: Office of the Union)		TC-EDC/Mar18/15	TWC/36/2	TC/54/18			TC-EDC/Mar19/9	TWP/3/10	TC/55/13			X	X	X	CAJ/76/5	TGP/8/5 Adopt
	Uniformity assessment on the basis of off-types: Method for more than one single test (year) (Drafter: Office of the Union)		TC-EDC/Mar18/16	TWP/2/10	TC/54/19							CAJ/76/5	TGP/8/5 Adopt				
TGP/9	Examining Distinctness	TGP/9/2 ADOPTED															
TGP/10	Examining Uniformity	TGP/10/1 ADOPTED															
	Assessing Uniformity by Off-types on the Basis of More than One Growing Cycle or on the Basis of Sub-Samples (Drafter: Office of the Union)		TC-EDC/Mar18/17	TWC/36/7	TC/54/20							CAJ/76/5	TGP/10/2 Adopt				
TGP/11	Examining Stability	TGP/11/1 ADOPTED															
TGP/12	Guidance on Certain Physiological Characteristics	TGP/12/2 ADOPTED															
TGP/13	Guidance for New Types and Species	TGP/13/1 ADOPTED															
TGP/14	Glossary of Terms Used in UPOV Documents	TGP/14/3 ADOPTED															
	Illustrations for shape and ratio characteristics (Drafter: Office of the Union)		TC-EDC/Mar18/18	TWP/2/11	TC/54/21							CAJ/76/5	TGP/14/4 Adopt				
	Color names for the RHS Colour Chart (Drafter: Andrea Menne (DE))		TC-EDC/Mar18/19	TWP/2/112	TC/54/22			TC-EDC/Mar19/9	TWP/3/11	TC/55/14			X	X	X	CAJ/76/5	TGP/14/5 Adopt
TGP/15	Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)	TGP/15/1 ADOPTED															
	Genetic selection of similar varieties for the first growing cycle (Drafter: Amanda van Dijk (NL))		TC-EDC/Mar18/10	TWV	TC/54/23							CAJ/76/5	TGP/15/2 Adopt				
	New example: Characteristic-specific marker with incomplete information on state of expression (Drafter: Amanda van Dijk (NL))				TC/54/11 Add.			TC-EDC/Mar19/9	TWP/3/12	TC/55/15			X	X	X	x	TGP/15/3 Adopt

[End of Annex VI and of document]