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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

### TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS

#### Thirty-First Session Seoul, June 4 to 7, 2013

#### ADDENDUM TO TGP DOCUMENTS

*Document prepared by the Office of the Union*

1. The purpose of this document is to provide comments on TGP documents made by the Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its forty-sixth session, held in Melbourne, Australia, from April 22 to 26, 2013, the Technical Working Party for Fruit crops (TWF), at its forty-fourth session, held in Napier, New Zealand, from April 29 to May 3, 2013, and the Technical Working Party for Vegetables (TWV), at its forty-seventh session, held in Nagasaki, Japan, from May 20 to 25, 2013.

2. The structure of this document is as follows:

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#### *TGP documents*

3. The TWO, TWF and TWV considered developments concerning TGP documents on the basis of documents TWO/46/3 Rev., TWF/44/3, TWF/44/3 Add., TWV/47/3 and TWV/47/3 Add., respectively (see document TWO/46/29 "Report", paragraph 12, document TWF/44/31 "Report", paragraph 15, and document TWV/47/34 "Report", paragraph 15).

#### *TGP/7: Development of Test Guidelines*

- (i) *Revision of document TGP/7: Additional Standard Wording for Growing Cycle for Tropical Species*

4. The TWO and TWF considered document TWO/46/9 and TWF/44/9 respectively, which was presented by an expert from New Zealand (see document TWO/46/29 "Report", paragraphs 19 to 21, and document TWF/44/31 "Report", paragraphs 23 to 24).

5. The TWV considered document TWV/47/9 (see document TWV/47/34 "Report", paragraphs 23 and 24).

6. The TWO considered the following proposed Additional Standard Wording (ASW) for growing cycle of tropical species:

*New (after (b)): Tropical fruit species*

The growing cycle is considered to be the period ranging from the beginning of flowering of an individual flower or inflorescence, through active flowering and fruit development and concluding with fruit harvest.

7. The TWO noted that the proposed ASW provided guidance for fruit species and agreed that it was a matter for consideration by the TWF. It noted that the drafter from New Zealand would propose to the TWF that the title of the ASW should be "Fruit species with indeterminate growth".

8. The TWF considered the proposed Additional Standard Wording (ASW) for growing cycle of tropical species and proposed the following wording:

*New (after (b)): ~~Tropical fruit species~~ Evergreen species with indeterminate growth*

*The growing cycle is considered to be the period ranging from the beginning of flowering of an individual flower or inflorescence, through active flowering and fruit development, and concluding with the harvesting of fruit.*

9. The TWV considered the proposed Additional Standard Wording (ASW) for growing cycle of tropical species and agreed with the proposed wording and the modifications proposed by the TWF (see above).

(ii) *Revision of document TGP/7: Source of Propagating Material*

10. The TWO, TWF and TWV considered the proposed guidance on source of propagating material, as presented in Section IV "Guidance for drafting Test Guidelines" of the Annexes to document TWO/46/10, document TWF/44/10 and to document TWV/47/10. The proposed guidance was presented by an expert from the European Union (see document TWO/46/29 "Report", paragraphs 22 and 23, document TWF/44/31 "Report", paragraphs 25 to 27, and document TWV/47/34 "Report", paragraphs 25 to 27).

11. The TWO agreed that it would not be appropriate to seek to insert additional standard wording on source of propagating material in the Technical Questionnaire, Section 9.2. However, the TWO noted that the document provided useful information on the effects of the source of propagating material and requested the preparation of a condensed version as a source of general guidance for drafters of Test Guidelines, for inclusion in document TGP/7.

12. The TWF noted that the document provided useful information on the effects of the source of propagating material as a source of general guidance for drafters of Test Guidelines, for inclusion in document TGP/7, and requested the expert from the European Union to prepare a condensed version of the wording to be presented to the TWF at its forty-fifth session in 2014.

13. The TWF invited an expert from Spain to make a presentation at the forty-fifth session of the TWF, on practical experience in the use of *in vitro* propagated material when submitted for DUS testing or certification schemes.

14. The TWV noted that the document provided useful information on the effects of the source of propagating material as a source of general guidance for drafters of Test Guidelines, for inclusion in document TGP/7, and requested the expert from the European Union, with the support of experts from France and Netherlands, to prepare a condensed version of the wording to be presented to the TWV at its forty-eighth session in 2014.

15. The TWV requested to add examples for vegetatively propagated vegetables.

*(iii) Revision of document TGP/7: Indication of Growth Stage in Test Guidelines*

16. The TWO, TWF and TWV considered document TWO/46/11, document TWF/44/11 and document TWV/47/11, respectively (see document TWO/46/29 "Report", paragraphs 24 to 26, document TWF/44/31 "Report", paragraphs 28 to 29, and document TWV/47/34 "Report", paragraphs 28 and 29).

17. The TWO noted that ornamental plants are usually observed at the time of full flowering and the indication of growth stages in Test Guidelines should remain optional and to be used where appropriate.

18. The TWO agreed that the Additional Standard Wording 4 (ASW 4) should be amended in order to reflect the current practice in UPOV Test Guidelines to indicate growth states using letters, numbers and combinations of letters and numbers, to read as follows:

"The optimum stage of development for the assessment of each characteristic is indicated by a number reference in the second column of the Table of Characteristics. The stages of development denoted by each number reference are described in Chapter 8 [...]."

19. The TWF considered that there was no need to amend the existing guidance in document TGP/7 with regard to the indication of the growth stage at which to observe characteristics in the Test Guidelines. The TWF noted that the existing guidance provided sufficient information and that the indication of growth stages in Test Guidelines should remain optional and to be used where appropriate.

20. The TWF noted that the expert from Germany would provide an updated link for "Growth stages of mono-and dicotyledonous plants – BBCH Monograph" in GN9

GN 9 (TG Template: Chapter 3.3) – Growth stage key

In cases where it is appropriate to provide a growth stage key for the observation of characteristics, the following is a useful guide:

"Growth stages of mono-and dicotyledonous plants - BBCH Monograph"  
(Federal Biological Research Centre for Agriculture and Forestry)  
ISBN Number: 3-8263-3152-4

<http://www.bba.de/veroeff/bbch/bbcheng.pdf>

21. The TWV considered that there was no need to amend the existing guidance in document TGP/7 with regard to the indication of the growth stage at which to observe characteristics in the Test Guidelines. The TWV noted that the existing guidance provided sufficient information and that the indication of growth stages in Test Guidelines should remain optional and be used where appropriate.

22. The TWV agreed with the TWO that the indication of growth stages in Test Guidelines should be used where appropriate, and should as far as possible use a harmonized, simple numbering, such as in the Test Guidelines for Potato (document TG/23/6) as illustrated below:

*"8.3 Optimal Stage of Development for the Assessment of Characteristics*

1 = bud stage  
2 = flowering stage  
3 = ripening stage of tubers  
4 = after harvest"

*(iv) Revision of document TGP/7: Providing Illustrations of Color in Test Guidelines*

23. The TWO and the TWF considered document TWO/46/12, document TWF/44/12, and document TWV/47/12, respectively (see document TWO/46/29 "Report", paragraphs 27 and 28,

document TWF/44/31 "Report", paragraphs 30 to 31, and document TWV/47/34 "Report", paragraphs 30 and 31).

24. The TWO agreed to propose the following guidance be included in a future revision of document TGP/7:

~~Particular caution is needed when considering the~~ It is generally not appropriate to use of illustrations of color in the Test Guidelines because the color in photographs can be affected by the technology of the camera, ~~and the facilities used to display the photograph (including printer, computer and screen, etc.) and lighting conditions under which the photograph is taken.~~ Furthermore, the expression of color may vary according to the environment in which the variety is grown. For example, a photograph of a "~~light weak~~ intensity" of anthocyanin coloration provided by the Leading Expert in one UPOV member may not represent a "~~weak light~~ intensity" of anthocyanin coloration in another UPOV member."

25. The TWF agreed with the proposal of the TWO at its forty-sixth session, to include the following guidance in a future revision of document TGP/7, with the addition of the wording ", as such," in the first sentence:

~~Particular caution is needed when considering the~~ It is generally not appropriate to use of illustrations of color, as such, in the Test Guidelines because the color in photographs can be affected by the technology of the camera, ~~and the facilities used to display the photograph (including printer, computer and screen, etc.) and lighting conditions under which the photograph is taken.~~ Furthermore, the expression of color may vary according to the environment in which the variety is grown. For example, a photograph of a "~~light weak~~ intensity" of anthocyanin coloration provided by the Leading Expert in one UPOV member may not represent a "~~weak light~~ intensity" of anthocyanin coloration in another UPOV member."

26. The TWV agreed with the proposal of the TWO at its forty-sixth session, and the TWF at its forty-fourth session, to include the following guidance in a future revision of document TGP/7, with the addition of the reference to "light intensity" of a color, in the last sentence:

~~Particular caution is needed when considering the~~ It is generally not appropriate to use of illustrations of color, as such, in the Test Guidelines because the color in photographs can be affected by the technology of the camera, ~~and the facilities used to display the photograph (including printer, computer and screen, etc.) and lighting conditions under which the photograph is taken.~~ Furthermore, the expression of color may vary according to the environment in which the variety is grown. For example, a photograph of a "~~light weak~~ intensity" of anthocyanin coloration or of a "light intensity" of a color, provided by the Leading Expert in one UPOV member may not represent a "~~weak light~~ intensity" of anthocyanin coloration or a "light intensity" of a color in another UPOV member."

(v) *Revision of document TGP/7: Presence of Leading Expert at Technical Working Party Sessions*

27. The TWO, TWF and TWV considered document TWO/46/13, document TWF/44/13, and document TWV/47/13, respectively, and agreed with the proposed guidance on the presence of leading experts at Technical Working Party sessions, for inclusion in a future revision of document TGP/7, section 2.2.5.3, as set out below (see document TWO/46/29 "Report", paragraph 29, document TWF/44/31 "Report", paragraph 32, and document TWV/47/34 "Report", paragraph 32):

"2.2.5.3 Requirements for draft Test Guidelines to be considered by the Technical Working Parties

"Unless otherwise agreed at the TWP session, or thereafter by the TWP Chairperson, the timetable for the consideration of draft Test Guidelines by the Technical Working Parties is as follows:

Action	Latest date before the TWP session
Circulation of Subgroup draft by Leading Expert:	14 weeks
Comments to be received from Subgroup:	10 weeks
Sending of draft to the Office by the Leading Expert:	6 weeks
Posting of draft on the website by the Office:	4 weeks

"In cases where *either* of the deadlines for circulation of the Subgroup draft or for the sending of the draft to the Office by the Leading Expert is not met, the Test Guidelines would be withdrawn from the TWP agenda and the Office would inform the TWP accordingly at the earliest opportunity (i.e. not later than 4 weeks before the TWP session). In those cases where draft Test Guidelines are withdrawn from the TWP agenda because of failure by the Leading Expert to meet the relevant dates, it would be possible for

specific matters concerning those Test Guidelines to be discussed at the TWP session. However, to consider specific matters it would be necessary for a document to be provided to the Office at least 6 weeks before the TWP session.”

“In order to be considered by a Technical Working Party, the Leading Expert of the draft Test Guidelines should be present at the session, unless a suitable alternative expert can be arranged to act as the Leading Expert sufficiently in advance of the session, or unless the Leading Expert is able to participate by electronic means.”

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

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

28. The TWO, TWF and TWV considered document TWO/46/14, document TWF/44/14, and document TWV/47/14, respectively (see document TWO/46/29 “Report”, paragraphs 30 to 32, document TWF/44/31 “Report”, paragraphs 33 to 35, and document TWV/47/34 “Report”, paragraphs 33 to 35).

29. The TWO proposed that experts from Australia, Germany, the Netherlands and the United Kingdom help to develop further guidance on the proposed text to be included in TGP/8 part I: DUS Trial and Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers, in a future revision of document TGP/8, with regard to guidance on PQ and QN/MG characteristics.

30. The TWO noted, however, the importance of the Test Guidelines in providing clear guidance for DUS examiners and to ensure consistency of observations.

31. The TWF agreed that the variation due to different observers was not relevant in fruit DUS testing as observations were usually made by a single observer, and therefore the TWF considered it unnecessary to provide experts to develop further guidance on the proposed text to be included in TGP/8 part I: DUS Trial and Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers, in a future revision of document TGP/8.

32. The TWF noted, however, the importance of the quality of the Test Guidelines in providing clear guidance for DUS examiners and in ensuring the consistency of observations. In that regard, the TWF recalled the work done previously on the consistency of variety descriptions in strawberry and apple (see document TWF/35/4). The TWF proposed that the expert from New Zealand report at the forty-fifth session, on the work done on the:” Publication of harmonized variety description for apple for an agreed set of varieties”, in order to consider if it could be relevant to further develop the study.

33. The TWV proposed that experts from the European Union, France and Netherlands will help the drafter to develop further guidance on the proposed text to be included in TGP/8 part I: DUS Trial and Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers, in a future revision of document TGP/8.

34. The TWV noted that the expert from the Netherlands will draft, in conjunction with other experts, a proposed text with regard to further guidance on PQ and QN/MG characteristics, to be circulated to the groups of experts of the other interested working parties.

(ii) *Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, Section 3: Method of Calculation of COYU*

35. The TWO, TWF and TWV considered document TWO/46/15, document TWF/44/15, and document TWV/47/15, respectively (see document TWO/46/29 “Report”, paragraphs 33 and 34, document TWF/44/31 “Report”, paragraphs 36 to 37, and document TWV/47/34 “Report”, paragraphs 36 and 37).

36. The TWO, TWF and TWV noted that:

(a) the TC had requested 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 that

(b) a document on possible proposals for improvements to COYU would be prepared for the TWC session in 2013.

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

37. The TWO, TWF and TWV considered document TWO/46/16, document TWF/44/16, and document TWV/47/16, respectively, which was presented by an expert from Australia at the TWO (see document TWO/46/29 "Report", paragraphs 35 and 36, document TWF/44/31 "Report", paragraphs 38 to 39, and document TWV/47/34 "Report", paragraphs 38 and 39).

38. The TWO, TWF and TWV noted the comments made by the TWPs at their sessions in 2012 and the TC, at its forty-ninth session in 2013. The TWO, TWF and TWV agreed with the proposed amendments for revision of Section 10 of document TGP/8 and the new proposed guidance in paragraphs 10.2.2 and 10.6 to specify the minimum number of comparable varieties in the relative variance method, as set out in the Annex to document TWO/46/16, document TWF/44/16, and to document TWV/47/16, respectively.

*(iv) Revision of document TGP/8: Part II: Selected Techniques used in DUS Examination, New Section: Examining DUS in Bulk Samples*

39. The TWO, TWF and TWV considered document TWO/46/17, document TWF/44/17, and document TWV/47/17, respectively (see document TWO/46/29 "Report", paragraphs 37 to 39, document TWF/44/31 "Report", paragraphs 40 to 42, and document TWV/47/34 "Report", paragraphs 40 to 42).

40. The TWO, TWF and TWV noted that the TC had 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.

41. The TWO, TWF and TWV 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".

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

42. The TWO, TWF and TWV considered document TWO/46/18, document TWF/44/18, and document TWV/47/18, respectively (see document TWO/46/29 "Report", paragraphs 40 to 42, document TWF/44/31 "Report", paragraphs 43 to 46, and document TWV/47/34 "Report", paragraphs 43 to 46).

43. The TWO, TWF and TWV considered the developments on a practical exercise with a common data set to produce variety descriptions of self-pollinated and/or vegetatively propagated varieties, in order to determine the aspects in common and divergence between methods, with a view to developing general guidance.

44. The TWO agreed with the practical exercise and requested the development of guidance on data processing for the assessment of distinctness and for producing variety descriptions of vegetatively propagated crops.

45. The TWF and the TWV agreed that the COY method is working well for cross pollinated crops and highlighted the importance of developing guidance for producing variety descriptions for self-pollinated and/or vegetatively propagated varieties. The TWF invited the expert from New Zealand to make a presentation at the forty-fifth session of the TWF in 2014, on the project for "apple reference varieties" that began in New

Zealand in 2011, and how this work would contribute to developing improved example varieties and variety descriptions.

46. The TWF and the TWV agreed with the value of a practical exercise and requested the development of guidance on data processing for the assessment of distinctness and for producing variety descriptions of vegetatively propagated crops.

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

47. The TWO, TWF and TWV considered document TWO/46/19, document TWF/44/19, and document TWV/47/19, respectively (see document TWO/46/29 "Report", paragraphs 43 to 46, document TWF/44/31 "Report", paragraphs 47 to 49, and document TWV/47/34 "Report", paragraphs 47 to 50).

48. The TWO, TWF and TWV noted the comments made by the TWPs at their sessions in 2012 and the TC-EDC in 2013, and considered the draft new Section on "Guidance for Data Analysis for Blind Randomized Trials".

49. The TWO noted that the draft new section related to the DUS trial design and suggested to change the title to "Draft guidance for blind randomized trials conducted by the authority or a third party".

50. The TWO suggested that the introduction to be provided should be generic and requested the addition of an example for ornamental plants.

51. The TWF and the TWV agreed that the drafter should further develop the guidance as set out in Annex II to document TWF/44/19 on draft guidance on data analysis for blind randomized trials for inclusion in a future revision of document TGP/8.

52. The TWV agreed that the guidance should include an explanation that the origin of the material should not influence the final judgment and that the authorization of the breeder should be obtained for varieties that were the subject of an application, as well as certain parent lines.

*(vii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Examining characteristics using image analysis*

53. The TWO, TWF and TWV considered document TWO/46/20, document TWF/44/20, and document TWC/47/20, respectively (see document TWO/46/29 "Report", paragraphs 47 to 50, document TWF/44/31 "Report", paragraphs 50 to 53, and document TWV/47/34 "Report", paragraphs 51 to 55).

54. The TWO, TWF and TWV noted the information on software and hardware used for image analysis, as set out in Annex I to document TWO/46/20, document TWF/44/20, and to document TWV/47/20, respectively.

55. The TWO, TWF and TWV noted that the AIM software for image analysis would be considered in document TWO/46/7, document TWF/44/7 and document TWV/47/7 "Exchangeable software".

56. The TWO, TWF and TWV noted that a draft of the new section "Examining Characteristics Using Image Analysis" for document TGP/8 would be presented to the TWC in 2013.

57. The TWV invited experts from Czech Republic, France, Germany, Netherlands and United Kingdom to make a presentation at its forty-eighth session, on the use of Image Analysis on Pea, Carrot, Onion and Parsley respectively. With regard to Pea, the TWV will receive presentations from the Czech Republic, France and United Kingdom in order to compare the method used for image analysis in different UPOV members on the same crop.

*(viii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Statistical methods for visually observed characteristics*

58. The TWO, TWF and TWV considered document TWO/46/23, document TWF/44/23, and document TWV/47/23, respectively (see document TWO/46/29 "Report", paragraphs 51 and 52, document TWF/44/31 "Report", paragraphs 54 to 55, and document TWV/47/34 "Report", paragraphs 56 and 57).

59. The TWO, TWF and TWV noted that:

(a) the TC had 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; and

(b) requested the TWC to clarify if it proposed to modify an existing method or provide a new additional method.

*TGP/14: Glossary of Terms Used in UPOV Documents*

*(i) Revision of document TGP/14: Section 2: Botanical Terms, Subsection 3: Color, Definition of "Dot"*

60. The TWO, TWF and TWV considered document TWO/46/21, document TWF/44/21, and document TWV/47/21, respectively (see document TWO/46/29 "Report", paragraphs 53 and 54, document TWF/44/31 "Report", paragraphs 56 to 57, and document TWV/47/34 "Report", paragraphs 58 and 59).

61. The TWO, TWF and TWV agreed that "dot" was a small "spot" and that only the term "spot" should be used in the future, according to the guidance provided in document TGP/14: Section 2: Botanical Terms, Subsection 3: Color. The TWO, TWF and TWV proposed that the Test Guidelines should be revised whenever the use of these terms could cause confusion.

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