

Technical Working Party on Automation and Computer Programs TWC/37/11

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COMMENTS ON TGP DOCUMENTS

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1. The purpose of this document is to report the comments on TGP documents made by the Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its fifty-first session, held in Christchurch, New Zealand, from February 18 to 22, 2019, the Technical Working Party for Vegetables (TWV), at its fifty-third session, held in Seoul, Republic of Korea, from May 20 to 24, 2019, the Technical Working Party for Fruit Crops (TWF), at its fiftieth session, held in Budapest, Hungary, from June 24 to 28, 2019 and the Technical Working Party for Agricultural Crops (TWA) at its forty-eighth session, held in Montevideo, Uruguay, from September 16 to 20, 2019.

2. The structure of this document is as follows:

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3. The following abbreviations are used in this document:

- 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

4. The TWO, TWV, TWF and TWA considered document TWP/3/1 Rev. "TGP documents" (see documents TWO/51/12 "Report", paragraph 8, TWV/53/14 "Report", paragraph 8, TWF/50/13 "Report", paragraph 9 and TWA/48/9 "Report", paragraph 8).

POSSIBLE FUTURE REVISIONS OF TGP DOCUMENTS

TGP/7: Development of Test Guidelines*Characteristics which only apply to certain varieties*

5. The TWO, TWV, TWF and TWA considered document TWP/3/9 (see documents TWO/51/12 "Report", paragraphs 19 to 23 TWV/53/14 "Report", paragraphs 12 to 16, TWF/50/13 "Report", paragraphs 11 to 13 and TWA/48/9 "Report", paragraphs 10 to 17).
6. The TWO, TWV, TWF and TWA considered the request to provide suitable examples of quantitative and pseudo-qualitative characteristics to demonstrate how the proposed approach might be used in a way that would not present risks for decisions on distinctness.
7. The TWO and TWA agreed that when a structure was "absent or very weak" on a plant part, the observation of further characteristics on that structure could be difficult or impractical. For example, it would not be practical to observe "hair: color" on a plant part with "presence of hairs: absent or very weak".
8. The TWO agreed that the following pseudo-qualitative characteristic from the Test Guidelines for Dahlia (TG/226/1) was a suitable example to demonstrate how the proposed approach might be used in a way that would not present risks for decisions on distinctness.
 "(PQ) Flower head: type: single (1); semi-double (2); daisy-eyed double (3); double (4)"
9. The TWO agreed that the header of the characteristic should preferably contain the exclusion and, if necessary, an explanation may be provided in the Test Guidelines.
10. The TWV agreed that when a structure was "absent or weak" on a plant part, the observation of further characteristics on that structure could be difficult. For example in the Test Guidelines for Lettuce (TG/13/11), characteristic 3: "Plant: degree of overlapping of upper part of leaves", indicated as QN, with states (1) "absent or weak, (2) medium, (3) strong. However the TWV agreed that in combination with the table provided in Chapter 5.3 of the Test Guidelines it reduced the risks for decisions on distinctness, and therefore encouraged the use of such tables when needed.
11. The TWV agreed that the following pseudo-qualitative characteristic from the Test Guidelines for Leaf Chicory (TG/154/4) was a suitable example to demonstrate how the proposed approach might be used in a way that would not present risks for decisions on distinctness:
 "Characteristic 16: "Plant: head formation: absent (1); open (2); closed (3)
 Characteristic 17: "Only for varieties with head formation..."
12. The TWF agreed that the following quantitative characteristic from the Test Guidelines for Fig (TG/265/1) was a suitable example to demonstrate how the proposed approach might be used in a way that would not present risks for decisions on distinctness.
 "Characteristic 17 (QN): "Leaf: predominant type: entire (1); three-lobed (2); five-lobed (3)
 Characteristic 18: "Only varieties with predominant leaf type: entire: Leaf: shape..."
13. The TWA noted that the following example provided by the TWF contained a qualitative characteristic and agreed that might not be a suitable example to demonstrate how the proposed approach might be used without further information about the characteristic:

 Characteristic 17 (QN): "Leaf: predominant type: entire (1); three-lobed (2); five-lobed (3)
 Characteristic 18: "Only varieties with predominant leaf type: entire: Leaf: shape..."
14. The TWA considered the request to provide suitable examples of unsuitable cases to demonstrate the risks for decisions on distinctness of excluding varieties from observation on the basis of a preceding quantitative or pseudo-qualitative characteristic.
15. The TWA agreed that the risk for distinctness due to the proposed approach was low because a variety would not be considered distinct from another on the basis of missing information about a characteristic and the varieties would have to be grown for side-by-side comparison.
16. The TWA agreed that the proposed approach could increase the difficulty to exclude varieties for comparison and increase the size of growing trials however that is unlikely to have a significant effect.

17. The TWA agreed that the risk of two examiners making different decisions was present but the probability of the proposed approach impacting the final distinctness decision was low.

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

Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions

18. The TWO, TWV, TWF and TWA considered document TWP/3/10 (see documents TWO "Report", paragraphs 24 to 26, TWV "Report", paragraphs 17 to 20, TWF "Report", paragraphs 16 to 19 and TWA/48/9 "Report", paragraphs 20 to 25).

19. The TWV, TWF and TWA also noted the information provided in documents TWV/53/12, TWF/50/12 and TWA/48/7 "Additional Information on Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions", respectively.

20. The TWA agreed that a flow chart or decision-tree could facilitate selection of a method to be used for converting observations into notes. The TWA agreed to propose the TWC experts from France, Germany, Japan and the United Kingdom to consider producing a flow chart with the following elements as starting point:

- Propagation type: self-pollinated; cross-pollinated
- Type of test to be performed
- Is a set of example varieties available to demonstrate the range of expression (e.g. notes 3; 5; 7)?
- Does the reference collection contain varieties to demonstrate the full range of expression of the characteristic (e.g. notes 1 to 9)?

TGP/14: Glossary of Terms Used in UPOV Documents

Color names for the RHS Colour Chart

21. The TWO, TWV, TWF and TWA considered document TWP/3/11 (see documents TWO/51/12 "Report", paragraphs 27 to 29, TWV/53/14 "Report", paragraphs 25 to 30, TWF/50/13 "Report", paragraphs 20 to 2 and TWA/48/9 "Report", paragraphs 26 to 27).

22. The TWO and the TWV considered the proposal for the revision of the list of UPOV Color Groups in document TGP/14 "Glossary of Terms used in UPOV Documents" on the basis of the color groups set out in document TWP/3/11, Annex I. The TWO and the TWF agreed that the new list of UPOV Color Groups prepared on the basis of the Sixth Edition of the RHS Colour Chart should be proposed for inclusion in document TGP/14.

23. The TWO and the TWV considered the proposal for the revision of document TGP/14, Section 2, Subsection 3: "Color", and Subsection 3: Annex: "Color names for the RHS Colour Chart", to reflect the introduction of the revised list of UPOV Color Groups. The TWO and the TWF agreed that document TGP/14 should be revised to reflect the introduction of the new list of UPOV Color Groups on the basis of the proposal set out in document TWP/3/11, Annex II.

24. The TWV noted that RHS colour charts were not commonly used in the vegetable sector (for DUS examination).

25. The TWA agreed that color charts were not commonly used in Test Guidelines for agricultural crops. It noted the development of proposals for the revision of the list of UPOV Color Groups in document TGP/14 "Glossary of Terms used in UPOV Documents" on the basis of the color groups set out in document TWP/3/11, Annex I, and revision of document TGP/14, Section 2, Subsection 3: "Color", and Subsection 3: Annex: "Color names for the RHS Colour Chart", to reflect the introduction of the revised list of UPOV Color Groups.

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

26. The TWO, TWV, TWF and TWA considered document TWP/3/12 (see documents TWO/51/12 "Report", paragraphs 30 to 35, TWV/53/14 "Report", paragraphs 21 to 24, TWF/50/13 "Report", paragraphs 25 to 29 and TWA/48/9 "Report", paragraphs 28 to 35).

27. The TWO, TWV, TWF and TWA noted that the TC had agreed that document TGP/15 should be amended 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.

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

29. The TWO, the TWV, TWF and TWA noted that the TC had agreed that a new example should be added to document TGP/15 to illustrate a situation where the characteristic-specific marker does not provide complete information on the state of expression of a characteristic.

30. The TWO, TWV and TWF agreed with the proposed example to be added to document TGP/15 to illustrate a situation where the characteristic-specific marker does not provide complete information on the state of expression of a characteristic, as set out in the Annex to document TWP/3/12.

31. The TWO noted that disease resistance characteristics were not commonly used in ornamental plants.

32. The TWV agreed that a new sentence should be added to TGP/15 in the case where a variety is claimed by the applicant to be resistant in the TQ but the marker test is negative, a bio-assay should be conducted/performed and be conclusive.

33. The TWA considered the proposal for a new example be added to document TGP/15 to illustrate a situation where the characteristic-specific marker does not provide complete information on the state of expression of a characteristic, as set out in the Annex to document TWP/3/12.

34. The TWA agreed that it should be clarified whether the sources of resistance to ToMV Strain 0 were genes Tm1/tm1 and Tm2/Tm2²/tm2 or whether there were other known sources of resistance.

35. The TWA agreed that it should be clarified whether different markers were linked to the alleles Tm2 and Tm2². In case both alleles were linked to the same marker, the two columns for the resistant alleles should be combined in Table 1 "Schematic overview of resistance to Tomato mosaic virus and resistance alleles."

36. The TWA agreed that the guidance should clarify that, according to the procedure, varieties claimed as susceptible would also be included in the bioassay.

NEW PROPOSALS FOR REVISIONS OF TGP DOCUMENTS

TGP/7: Development of Test Guidelines

Procedure for partial revision of UPOV Test Guidelines

37. The TWO, TWV, TWF and TWA considered the proposal for the revision of document TGP/7 and noted that the TC had considered a proposal to revise the procedure for partial revisions of Test Guidelines (see documents TWV/53/14 "Report", paragraphs 31 and 32, TWF/50/13 "Report", paragraphs 30 to 33 and TWA/48/9 "Report", paragraphs 36 and 37).

38. The TWV and TWF welcomed the possibility to have an accelerated procedure for partial revisions of Test Guidelines, allowing the possibility for experts to come with new proposals in the course of the year, respecting the deadline agreed to prepare and circulate the document on time before the session, to allow sufficient time for consideration by members of the Union. The TWF 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.

39. The TWF 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:

- 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

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

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

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

41. The TWO, TWV, TWF and TWA considered the proposal for the revision of document TGP/7 to clarify that all states of expression for quantitative characteristics should be presented in Test Guidelines (see documents TWO/51/12 "Report", paragraphs 15 and 16, TWV/53/14 "Report", paragraphs 35 and 36, TWF/50/13 "Report", paragraphs 36 and 37 and TWA/48/9 "Report", paragraphs 40 to 42).

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

43. 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.

44. 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.

45. The TWA agreed that it would not be possible to reach a conclusion on the matter at this stage.

46. 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.

47. 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.

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