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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
 Geneva

**TECHNICAL WORKING PARTY FOR FRUIT CROPS**

**Forty-Fifth Session**  
**Marrakesh, Morocco, May 26 to 30, 2014**

ADDENDUM TO TGP DOCUMENTS

*Document prepared by the Office of the Union*

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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-seventh session, held in Naivasha, Kenya, from May 19 to 23, 2014.

2. The structure of this document is as follows:

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*TGP documents*

3. The TWO considered developments concerning TGP documents on the basis of document TWO/47/3 (see document TWO/47/28 "Report", paragraph 12).

TGP Documents

*Program for the development of TGP documents*

4. The TWO noted the program for the development of TGP documents, as set out in document TWO/47/3, Annex II.

5. The TWO considered the TGP documents below on the basis of document TWO/47/3 "TGP documents" and other documents, as indicated.

TGP/7: Development of Test Guidelines

(i) *Revision of Document TGP/7: Plant Material Submitted for Examination*

6. The TWO considered document TWO/47/12.

7. The TWO received presentations by the experts from the European Union and the Netherlands on experiences with regard to plant material submitted for examination, and the solutions that have been developed to address problems. It noted that a copy of the presentations would be provided as an addendum to document TWO/47/12.

8. The TWO noted that plant material of vegetatively propagated varieties submitted for examination could be adversely affected by factors such as: transportation handling; inappropriate use of chemicals; different methods of micro-propagation; adverse effects of tissue culture, etc., resulting in variability within the material that could present problems for the examination of uniformity. The TWO observed that such problems would normally appear during the establishment phase of the variety and might, as appropriate, require a new submission of material, testing for an additional growing cycle, or rejection of the application. It clarified that such problems, which arose prior to receipt of material by the examining authority, needed to be addressed by the breeder. The TWO agreed that such problems only concerned a small proportion of plant material received for examination.

9. The TWO agreed that authorities in charge of receiving plant material for examination should provide guidance on the requirements of material submitted such as quality and age.

(ii) *Revision of Document TGP/7: Coverage of the Test Guidelines*

10. The TWO considered document TWO/47/13 and agreed that Approach 3 “Specify existing type of propagation and anticipate future developments” was the most appropriate guidance for Test Guidelines that are developed on the basis of varieties with one type of propagation when varieties may be developed in the future with other types of propagation. The TWO, therefore, agreed that ASW 8 should be amended to read as follows:

“ASW 8 (TG Template: Chapter 4.2) – Uniformity assessment

(a) *“Cross-pollinated varieties*

(i) *“Test Guidelines covering only cross-pollinated varieties*

“The assessment of uniformity should be according to the recommendations for cross-pollinated varieties in the General Introduction.”

“These Test Guidelines have been developed for the examination of cross-pollinated varieties. For varieties with other types of propagation the recommendations in the General Introduction and document TGP/13 “Guidance for new types and species”, Section 4.5: “Testing Uniformity” should be followed.”

[...]

(c) *Uniformity assessment by off-types (all characteristics observed on the same sample size)*

~~(i) *Test Guidelines covering only varieties with uniformity assessed by off-types*~~

~~“For the assessment of uniformity, a population standard of { x }% and an acceptance probability of at least { y } % should be applied. In the case of a sample size of { a } plants, [{ b } off-types are] / [1 off-type is] allowed.”~~

~~(ii) *Test Guidelines covering varieties with uniformity assessed by off-types and other types of varieties*~~

“For the assessment of uniformity of [self-pollinated] [vegetatively propagated] [seed-propagated] varieties, a population standard of { x }% and an acceptance probability of at least { y } % should be applied. In the case of a sample size of { a } plants, [{ b } off-types are] / [1 off-type is] allowed.”

“These Test Guidelines have been developed for the examination of [type of propagation] varieties. For varieties with other types of propagation the recommendations in the General Introduction and

document TGP/13 “Guidance for new types and species”, Section 4.5: “Testing Uniformity” should be followed.”

(iii) *Revision of Document TGP/7: Drafter's Kit for Test Guidelines*

11. The TWO considered document TWO/47/14.

12. The TWO noted the plans for a revision of document TGP/7 and the TG Drafter's webpage for consistency with the introduction of the web-based TG Template in 2014, as set out in document TWO/47/14, paragraphs 6 to 8.

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*

13. The TWO considered document TWO/47/15.

14. The TWO noted that the TWF had requested an expert from New Zealand to report at its session in 2014, on the previous work done on harmonized variety description for apple for an agreed set of varieties, as set out in document TWO/47/15, paragraph 18.

15. The TWO agreed that the draft guidance in the Annex to document TWO/47/15 should continue to be developed for inclusion in a future revision of document TGP/8 on minimizing the variation due to different observers, including guidance on PQ and QN/MG characteristics, in conjunction with the points raised by the expert from Australia in document TWO/47/15, paragraph 21. The TWO agreed that the document should focus on variation between observers at the authority level and not on minimizing observer variation between authorities.

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

16. The TWO noted the developments in document TWO/47/16 concerning the method of calculation of COYU, including the development of a demonstration module in DUST and the practical exercise that would be conducted using real data to compare decisions made using the current and the proposed improved method.

(iii) *Revision of Document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Examining DUS in Bulk Samples*

17. The TWO considered in document TWO/47/17.

18. The TWO considered the example of a bulk characteristic from the Netherlands and agreed that the scale used should have non-overlapping notes (0-5; ~~5~~6-10; ~~10~~11-15; ...)

19. The TWO noted the information that “[...] *the results per variety are stable over the years with only 3 plants per variety. This is an indication that the characteristic is uniform between plants within the variety. [...]*”. The TWO agreed that the usual approach was to confirm uniformity prior to the establishment of stability and that care would be needed on the examination of stability allowing for the establishment of uniformity of a variety for a given characteristic.

20. The TWO agreed that examples of other characteristics examined on the basis of bulk samples could be considered for the development of guidance.

(iv) *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*

21. The TWO considered in document TWO/47/18.

22. The TWO noted that an expert from New Zealand had been invited to make a presentation at the forty-fifth session of the TWF, on the project for “apple reference varieties” that began in New Zealand in 2011.

23. The TWO noted the explanation of the different forms that variety descriptions could take and the relevance of scale levels in that regard, as presented in Annex II to document TWO/47/18.

24. The TWO noted the information on the guidance for varieties description in Italy, as presented in Annex III to document TWO/47/18.

25. The TWO noted that the results of the practical exercise would be presented to the TWC at its thirty-second session.

(v) *Revision of Document TGP/8: Part II: Selected Techniques used in DUS Examination, New Section: Guidance for Blind Randomized Trials*

26. The TWO considered document TWO/47/19 and agreed that blind randomized trials were rarely used. The TWO noted that blind randomized trials were used: in Brazil to confirm, in some cases, the assessment of distinctness under a breeder-based testing system for agricultural crops and vegetables; in New Zealand, for some fruit crops and in cases of dispute regarding distinctness; and in the United Kingdom and the Netherlands to confirm lack of distinctness between varieties.

27. The TWO noted that the example in document TWO/47/19 referred to seed-propagated varieties and agreed that other aspects of the trial set up should be considered for vegetatively propagated plants, such as the type and source of plant material used, as considered under the item “Plant Material Submitted for Examination”.

28. The TWO noted the proposal from the expert from France to prepare a new draft for consideration by the TC and the TWPs at their sessions in 2015.

(vi) *Revision of Document TGP/8: Part II: Selected Techniques used in DUS Examination, New Section: Examining Characteristics using Image Analysis*

29. The TWO considered document TWO/47/20 and noted the proposal from the expert from the European Union to prepare a new draft for consideration by the TC and the TWPs at their sessions in 2015.

30. The TWO agreed to request the drafter to consider including typical examples of characteristics that could be assessed by image analysis, such as leaf area and length / width of grain.

(vii) *Revision of Document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Statistical Methods for Visually Observed Characteristics*

31. The TWO considered document TWO/47/21 and noted the developments concerning a possible New Section: “Statistical Methods for Visually Observed Characteristics” to be introduced in document TGP/8: Part II: Techniques Used in DUS Examination, in a future revision of document TGP/8.

32. The TWO agreed that it should be clarified that the new proposed method was used for the visual observation of individual plants or parts of plants (VS).

TGP/9: Examining distinctness

(i) *Revision of Document TGP/9: Schematic Overview of TGP Documents Concerning Distinctness*

33. The TWO considered document TWO/47/22 and agreed with the proposed revision of the flow diagram in TGP/9, Section 1.6 “Schematic overview of TGP documents concerning distinctness”, as set out in document TWO/47/22, paragraph 7 and Annexes I and II.

(ii) *Revision of Document TGP/9: Section 2.5: Photographs*

34. The TWO considered document TWO/47/22 and agreed with the proposed guidance on photographs for inclusion in document TGP/9, Section 2.5 “Photographs”, as follows:

“2.5.3 The suitability of photographs for the identification of similar varieties is strongly influenced by the quality of the photographs taken by the authority for the varieties in the reference collection and the photograph of the candidate variety provided by the applicant with the Technical Questionnaire. Comprehensive guidance for taking suitable photographs is provided in TGP/7, GN 35 (new). The guidance was developed in particular for the applicants to provide suitable photographs of the candidate variety. The same instructions are important and useful for the authorities to take photographs of the varieties in the variety collection under standardized conditions.”

(iii) *Revision of Document TGP/9: Method of Observation (Single Measurement – MG)*

35. The TWO considered document TWO/47/22 and the proposed example of a single record for a group of plants (MG) taken on plant parts for inclusion in a future revision of document TGP/9, Section 4.3.2 “Single record for a group of plants or parts of plants (G)” and Section 4.3.4 “Schematic Summary”, as set out in document TWO/47/22, paragraphs 16 and 17.

36. The TWO noted that in order to obtain a single record for a group of plants (MG) taken on plant parts of vegetatively propagated plants the DUS examiner would visually assess the plants and confirm they are uniform before proceeding further. The approach is the same as in the “Plant: height” example but organs are removed to conduct the assessment. A typical plant is used to record the measurement. The TWO noted that no variety mean was calculated and that the measurement was used for comparing data with other varieties in the variety collection.

37. The TWO agreed that the example of a single record for a group of plants (MG) taken on plant parts for inclusion in a future revision of document TGP/9, Section 4.3.2 “Single record for a group of plants or parts of plants (G)” and Section 4.3.4 “Schematic Summary” should read as follows:

“Example (MG)

“Measurement (MG): “Leaf blade: width” in Hosta (vegetatively propagated): a representative measurement in the plot.”

38. The TWO agreed that a suitable illustration should be provided for inclusion in document TGP/7, Subsection 4.3.4.

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

39. The TWO considered document TWO/47/9 and the situations described in the Annexes I to IV as a basis to develop guidance in document TGP/10.

40. The TWO agreed that clarification should be provided on the decision to be taken in Situation B, Alternative (a) “the trial is repeated at both locations for a second year”, in case after repeating a trial for the second year a variety is within the uniformity standard in one growing location but is not within the uniformity standard in the other growing location.

TGP/14: Glossary of Terms Used in UPOV Documents

*Revision of Document TGP/14: Section 2.4: Apex/Tip Characteristics*

41. The TWO considered document TWO/47/23.

42. The TWO considered the proposal to develop an explanation on the inclusion of a state of expression based on a differentiated tip in shape of apex characteristics and proposed that document TGP/14, section 2.4 be amended as follows:

“2.4.1 The apex of an organ or plant part is the end furthest from the point of attachment. In some cases, the distal extremity of the apex may be differentiated into a “TIP”.

“2.4.2 In considering the approach to describe the apex, the size of the organ and the number of apex shapes should be taken into account. Apex characteristics can be described in simple terms and if a differentiated tip is present it could be further described as a separate characteristic. Generally, it is not necessary to separate the apex shape characteristic.

“2.4.3 In cases where it is appropriate to separate into differentiated tip and apex characteristics, the shape of the apex is taken as the general shape, excluding any differentiated tip. For example: [...]”

43. The TWO agreed that the approach in document TGP/14 for shape of apex and tip characteristics was most suitable for leaves or larger structures and should be used in particular cases only.

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