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# INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

## TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

### Forty-First Session Angers, France, May 21 to 25, 2012

#### REVISION OF DOCUMENT TGP/7: EXAMPLE VARIETIES

*Proposal prepared by an expert from France*

#### BACKGROUND

1. Document TGP/7/2 Draft 2, considered by the Technical Committee (TC) at its forty-fifth session, held in Geneva from March 30 to April 1, 2009, indicated that experts from France would develop a document, based on GN 28 "Example varieties", for discussion at the TWP sessions in 2009. However, the Technical Working Party for Vegetables (TWV), held from April 20 to 24, 2009, was less than three weeks after the forty-fifth session of the TC, which meant that it was not feasible to prepare a document for consideration by the TWV in 2009. The TWV noted that it would not be able to review any proposed amendments to GN 28 before the TC considered the approval of document TGP/7/2 in 2010. The TWV noted the importance of example varieties in Test Guidelines for vegetable crops and generally supported the text in GN 28. Therefore, to avoid a delay in the adoption of document TGP/7/2, it proposed that document TGP/7/2 should be adopted in 2010 without amendments to GN 28 and that any proposed amendments should be considered in a future revision of document TGP/7, if appropriate. The Technical Working Party for Agricultural Crops (TWA), at its thirty-eighth session, held in Seoul, Republic of Korea, from August 31 to September 4, 2009, agreed with that proposal and also agreed to add an agenda item to discuss example varieties at its thirty-ninth session (see document TWA/38/17 "Report", paragraph 36).

2. The Technical Working Party for Ornamental Plants and Forest Trees (TWO) and Technical Working Party for Fruit Crops (TWF), at their sessions in 2009, agreed that experts with suggestions concerning the document to be developed on example varieties should send those to Mr. Joël Guiard (France), or to the Office of the Union, which would forward the suggestions to Mr. Guiard. The expert from New Zealand explained that he would raise the matter of example varieties that were a matter of common knowledge, but did not have a denomination.

3. At its forty-sixth session, held in Geneva from March 22 to 24, 2010, the TC agreed that consideration be given to example varieties in a future revision of TGP/7 (document TGP/7/3) (see document TC/46/15 "Report on the Conclusions", paragraph 31).

4. The TC at its forty-seventh session, held in Geneva from April 4 to 6, 2011, considered the proposal, prepared by an expert from France, as presented in the Annex to this document and the

comments of the TWPs in relation to that proposal. The TC agreed that the subject of example varieties would be considered as a possible matter for discussion on the Monday session of the TC, in 2012, "which will be dedicated to a discussion on experiences of members if the Union in measures to improve the efficiency and effectiveness of DUS testing. (see document TC/47/26 "Report on the Conclusions", paragraphs 62 and 111).

## COMMENTS BY THE TECHNICAL WORKING PARTIES AT THEIR SESSIONS IN 2011

### Technical Working Party for Agricultural Crops (TWA)

5. At its fortieth session, held in Brasilia, Brazil, from May 16 to 20, 2011, the TWA considered document TWA/40/18 and noted the comments from the TWPs in 2010. The TWA agreed that, for the time being, it was not necessary to redraft the proposal prepared by an expert from France concerning example varieties (see Annex to document TWA/40/18) and that it would be discussed on the Monday session of the TC in 2012. The TWA recommended that the TC should consider the possibility for national authorities to exchange example varieties. The expert from the Republic of Korea noted that it might be useful to have contact details of the relevant experts (see document TWA/40/23 "Report", paragraph 18).

### Technical Working Party on Automation and Computer Programs (TWC)

6. The TWC considered document TWC/29/18 and noted the comments from the TWPs in 2010 and the TWA, at its fortieth session, held in Brasilia, Brazil, from May 16 to 20, 2011. The TWC agreed with the comments made at that session of the TWA (see document TWC/29/31 "Report", paragraph 17).

### Technical Working Party for Vegetables (TWV)

7. At its forty-fifth session, held in Monterey, United States of America, from July 25 to 29, 2011, the TWV considered document TWV/45/18.

8. The TWV noted that TGP/7 "Development of Test Guidelines", Guidance Note GN 28 states as follows:

*"1. Purpose of example varieties*

"The General Introduction (Chapter 4.3) states that "example varieties are provided in the Test Guidelines to clarify the states of expression of a characteristic." This clarification of the states of expression is required with respect to two aspects:

- (a) to illustrate the characteristic and/or
- (b) to provide the basis for ascribing the appropriate state of expression to each variety and, thereby, to develop internationally harmonized variety descriptions."

9. The TWV agreed that example varieties in the UPOV Test Guidelines could not be expected to provide internationally harmonized variety descriptions. It proposed that GN 28 be revised to explain that example varieties would be useful for: (a) members of the Union to be able to establish a range of expression for characteristics for crops and species in which they did not have experience; and (b) inclusion in the Technical Questionnaire as a basis for guidance for applicants. The TWV further agreed that it would discuss the role of example varieties in the Monday morning session of the Technical Committee in 2012 (see document TWV/45/26 "Report", paragraph 19 to 21).

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

10. The TWO at its forty-fourth session held in Fukuyama City, Hiroshima Prefecture, Japan, from November 7 to 11, 2011, did not agree with the general view expressed by the TWV at its forty-fifth session, that example varieties in the UPOV Test Guidelines could not be expected to provide internationally harmonized variety descriptions. The TWO noted that example varieties could provide the basis for useful international harmonization of variety descriptions for ornamental varieties, as indicated in the model study for Petunia (document TWO/37/8) where it had been seen that there was

a high level of consistency for the states of expression across varieties (see document TWO/44/25 "Report", paragraph 18).

The Technical Working Party for Fruit Crops (TWF)

11. The TWF at its forty-second session in Hiroshima, Japan, from November 14 to 18, 2011, considered the document TWF/42/18 and agreed to add a new paragraph after paragraph 13:

"Test Guideline drafters should take steps to ensure that example varieties proposed by other members of the subgroup are compatible with those provided by the leading expert for that characteristic. This is of particular importance for quantitative characteristics (QN). The best approach would be for a subgroup member to propose a full set of varieties for that characteristic."

12. The TWF expressed the need to develop guidelines for leading experts on how to accept the example varieties proposed by the other experts, following the principles of regional sets of example varieties, as set out in document TWF/42/18.

13. The TWF supported the revision and review of example varieties and agreed to only include varieties which are readily available.

14. The TWF also agreed with the proposal that this issue be discussed on the Monday session of the TC meeting in 2012 (see document TWF/42/26 "Report", paragraphs 18 to 21).

COMMENTS BY THE TECHNICAL COMMITTEE IN 2012

15. The TC, at its forty-eighth session held in Geneva, Switzerland, from March 26 to 28, 2012, discussed example varieties on the basis of a presentation "Example varieties" by Mr. Richard Brand (France) (see [http://www.upov.int/edocs/mdocs/upov/en/tc\\_48/example\\_varieties.pdf](http://www.upov.int/edocs/mdocs/upov/en/tc_48/example_varieties.pdf) ).

16. The Chairman of the TC recalled that the discussion concerned the inclusion of example varieties in the (UPOV) Test Guidelines and noted that a complete set of example varieties would be important for each member of the Union. With regard to example varieties in the Test Guidelines, he concluded that, in many cases, it would be difficult to identify a "universal" set of example varieties that would be suitable for all members of the Union. However, where it was not possible to develop a universal set of example varieties, he noted that it might still be beneficial to try to preserve similar ranges for the states of expression for all members of the Union. With regard to solutions where a universal set of example varieties could not be agreed for all members of the Union, he recalled that regional sets of example varieties could be an effective measure. He also observed that the making available of variety descriptions by members of the Union could be an important source of information, whilst noting that the development of such databases would involve substantial cost.

17. With regard to Test Guidelines, the Chairman noted a suggestion that the Leading Expert might provide a full list of varieties that might be available as example varieties, rather than suggesting a limited list. He also recalled that, where appropriate, example varieties might be replaced by illustrations and references to calibration books of members of the Union, in the Test Guidelines' Chapter on Literature (see document TC/48/22 "Report on the Conclusions", paragraphs 10 to 12).

18. The TC, at its forty-eighth session agreed that the experts from France should be requested to make a presentation to the TWPs at their sessions in 2012 on the basis of the presentation made under agenda item "Discussion on experiences of members of the Union on measures to improve the efficiency and effectiveness of DUS testing" and reflecting the comments and suggestions made during the discussion (see document TC/48/22 "Report on the Conclusions", paragraph 45).

19. A presentation on "Example Varieties" on the basis of the presentation made under agenda item "Discussion on experiences of members of the Union on measures to improve the efficiency and effectiveness of DUS testing" and reflecting the comments and suggestions made during the discussion (see document TC/48/22 "Report on the Conclusions", paragraph 45) will be made by experts from France at the forty-first session of the TWA.

[Annex follows]

PROPOSAL PREPARED BY AN EXPERT FROM FRANCE

Discussion

1. UPOV Test Guidelines are essential tools to achieve harmonization of variety descriptions throughout UPOV members and to take good decisions on Distinctness, Uniformity and Stability ("DUS").
2. Harmonization is based on different elements:
  - Test design (plant material, number of plants, lay out ...)
  - List of characteristics with states of expression, notes, example varieties ...
  - Explanations of how observations should be made
  - Decision rules on Distinctness, Uniformity and Stability.
3. Since the first Test Guidelines, example varieties for all or some of the states of expression of each characteristic in a Test Guidelines have been considered as an important element for the harmonization of variety descriptions. An example variety for at least some notes in a scale is essential to define more precisely the state of expression related to the corresponding note and, in principle, offers the possibility to compare descriptions established in different environments.

Conditions to be fulfilled to have an efficient set of example varieties across UPOV members

4. The conditions can be listed as follows:
  - (a) Example varieties must be well-known across the member States, freely accessible and with plant material available on request by the examination offices;
  - (b) As far as possible, for a given characteristic the set of example varieties must cover the full range of variation known in the species;
  - (c) The expression of a given characteristic must not change too much in relation to the environment; and
  - (d) Considering a set of example varieties for a characteristic, the rank of each example variety must not change compared to the others across different environments. In other words, the interaction between example varieties and the environment must not be significant.

Current situation in the Test Guidelines

5. When UPOV comprised only a few member States, only a small number of countries had a specific interest in the new or revised Test Guidelines for a particular crop or species. The preparation of the draft Test Guidelines included a significant amount of time to define the set of example varieties, including exchange of data, comparison of descriptions on a common set of potential example varieties and ring-tests to determine the best varieties with a broad consensus. That was already difficult and was not always achievable.
6. With the expansion of UPOV membership to cover all continents, this kind of approach became increasingly difficult for the following reasons:
  - (a) The range of variation of a characteristic in a species can be completely different depending on the agro-climatic areas and the breeding programs in the world: frequently only a part of this variability can be grown in certain parts of the world, due to physiological traits. As an example, soybean varieties grown in the Southern hemisphere cover a wide range of earliness and only the earliest ones can be grown in the Northern hemisphere;

(b) The interaction between variety and environment can be very important and leads to very different descriptions of varieties between different locations. As an example, the characteristic "Seasonal type" in wheat observed under cold or warm climates will not produce the same description and the expression of many other characteristics included in the Test Guidelines will be modified. The varieties do not reach a correct development; and

(c) The availability of plant material is increasingly difficult and sometimes impossible to obtain for phytosanitary reasons or due to the variety turnover.

7. This situation leads to more and more difficulties to determine a common set of example varieties for all characteristics in new or revised Test Guidelines.

8. We can observe that for many UPOV members, specific sets of example varieties are used (see the UPOV Seminar on DUS Testing, held in Geneva, from March 18 to 20, 2010, [http://www.upov.int/en/documents/dus\\_seminar/dus\\_seminar\\_index.html](http://www.upov.int/en/documents/dus_seminar/dus_seminar_index.html)) and in some parts of the world, efforts have been made to develop regional sets of example varieties (Rice in Asian countries (see TG/16, Annex "Example Varieties: North East Asia"), Maize in European countries).

#### PROPOSAL TO IMPROVE THE SITUATION

9. Based on current experience, we observe that generally the sets of example varieties in new or revised Test Guidelines are only partially complete or, when required for asterisk characteristics, only based on proposals made by the Leading Expert. Except for a few characteristics, no systematic efforts are made to check if they are adequate in other UPOV members. Therefore, the question of example varieties might be tackled by another approach.

10. The following points will consider the different steps which must be considered and the solutions which can be adopted:

##### Firstly: check if example varieties are useful or not for each characteristic.

11. Two elements must be considered to evaluate the necessity to establish a set of example varieties:

(a) The type of expression (QL, QN, PQ) of the characteristic as defined in the General Introduction to the Examination of DUS and Development of harmonized Descriptions of new Varieties of Plants (see document TG/1/3, Chapter 4.4 "Types of Expression of Characteristics");

(b) The susceptibility of characteristic's expression to environmental effect.

12. In case of qualitative (QL) characteristics and, to a certain extent Pseudo-qualitative (PQ) characteristics, descriptions can be made without any reference to a set of example varieties even if they are not so difficult to obtain. Illustrations, drawings, international references (e.g. color chart) or explanations are generally sufficient to guide the observer. This solution could avoid the need for a list of example varieties, which are not always available for all interested UPOV members, and would save time when developing Test Guidelines.

13. Chapter 8 of the Test Guidelines (Explanations on the Table of Characteristics") and document TGP/14 "Glossary of Terms Used in UPOV Documents" are useful tools to develop descriptions for these types of characteristics. The development of digital pictures is also available to provide illustrations of levels of expression without indication of the variety name.

14. Recommendations could be made to the drafters of Test Guidelines (Leading Experts) to use these tools as much as possible, including the possibility to refer to a specific paragraph of document TGP/14.

##### Secondly: refer to regional sets of example varieties

15. For Quantitative (QN) characteristics and some PQ characteristics, we must admit that it is not possible to develop a universal set of example varieties for a characteristic in the Test Guidelines that is applicable for all UPOV members.

16. It must be emphasized that a variety description for quantitative characteristics greatly depends on the location and the time when it is established.

17. A stable set of example varieties for a country or region is a good tool to control the interaction between variety and environment but, at the worldwide level, it is not possible to establish a universal set of example varieties that would be useful and applicable for all interested UPOV members.

18. The UPOV Test Guidelines do not promote real harmonization for quantitative characteristics if sets of example varieties are only used in a few countries.

19. It would be better to promote the development of regional sets of example varieties as already done for certain crops. UPOV could further develop the system of registering these sets with the indication of their origin and the agro-climatic area covered.

20. With such a system, any UPOV member willing to develop a DUS test on a species, or to get more information on a variety description, could refer to the most appropriate set of example varieties according to its own agro-climatic conditions. If no set was available, it could develop its own set according to rules which could be established by UPOV in document TGP/7 "Development of Test Guidelines".

[End of Annex and of document]