



TWC/29/12

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
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**TECHNICAL WORKING PARTY ON AUTOMATION AND
COMPUTER PROGRAMS**

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REVISION OF DOCUMENT TGP/7:
PROVIDING PHOTOGRAPHS WITH THE TECHNICAL QUESTIONNAIRE

Document prepared by experts from the European Union

BACKGROUND

1. The background to this proposal is presented in document TWA/40/3.

PROPOSAL

(Changes to documents TWC/28/19, TWV/44/19, TWO/43/19 and TWF/41/19 are indicated by strikethrough (deletions) and underline (additions))¹

Additional Standard Wording (ASW)

2. Currently, TGP/7 (TG Template: Chapter 10: TQ 7.3) ASW 16 “Where a photograph of the variety is to be provided” states the following:

“A representative color photograph of the variety should accompany the Technical Questionnaire”

3. That text could be expanded in the Technical Questionnaire (TQ) in order to briefly explain to applicants the purpose of the color photograph. A weblink could also be created via

the new text in the TQ in order to provide greater details on the best manner in which to take photographs, based on documents TWO/42/16 and TWF/40/14. The proposed new text for ASW 16 could read as follows:

“A representative color photograph (image) of the variety displaying its main distinguishing feature(s), ~~must~~^{should}~~2~~ accompany the Technical Questionnaire. [A photograph provided according to the specified requirements (see [authority reference to be added])~~in an appropriate format~~ will help the examination authority to prepare its examination of distinctness in a more efficient way, by giving a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire. The information provided by the photograph may be used in the selection of the most appropriate varieties of common knowledge to be grown alongside the candidate variety in the trial, as well as to place group the variety optimally within the DUS trial. ~~For greater details, please consult the following weblink: www.[.....].~~”[#]

Guidance for applicants on providing suitable photographs of the candidate variety as accompaniment to the Technical Questionnaire

Introduction

4. The taking of photographs of candidate varieties is influenced by ~~various~~ factors, such as including light conditions, and the background. The perception of the photograph can also be affected by the quality and resolution of the camera, as well as~~or~~ the resolution of the screen on which the image is~~photos are~~ viewed, or the quality of the paper and ink for developed photographs. It is certainly not possible to standardize all conditions when photos are taken in the premises of applicant breeders but this document~~paper~~ aims to provide guidance in order to provide meaningful and coherent information on the candidate variety, while decreasing the influence of the origin of the photograph (location, equipment, etc). By decreasing the influence of these external factors on the taking of photographs, it will help to ensure that “color”, the most significant trait liable to be affected by such factors~~an imprecise picture~~, will be reliably represented in photographs provided by applicants. ~~It should be noted that whilst a photograph may broadly depict color, reference to the relevant RHS Colour Chart in the text provides greater precision.~~

Criteria for taking photographs

Format

5. Photographs must be in color and submitted either in print form of at least 10 cm x 15 cm, or as an electronic photo in jpeg format (minimum 960x1280 pixels). It should be noted that different makes/models of computer screens can influence the expression of the color and the advantage of a printout is that the applicant breeder can make a comment, e.g. actual color darker, and the examination office would see exactly the same printout. The photograph must be well focused and aim to have the plants or plant parts occupy as much of the frame of the photograph as possible.

Best time for taking photographs

6. Photographs must illustrate plants of the candidate variety at the stage when the distinctive features of the variety are most apparent. Often this is when the plants are fully

[#] Authorities may include this section, duly completed, if appropriate

developed and at the stage when they are of commercial value (e.g. flowering for many ornamentals, fruiting for many fruit species), which usually corresponds to the main set of characteristics in the corresponding UPOV guideline for the species in question.

Optimal photographic environment

7. Photographs should be taken under adequate light conditions and with an appropriate background. It is preferable to have photographs taken indoors, since one can ensure homogenous photographic conditions irrespective of the type of photographs and number of candidate varieties supplied by the same applicant. The background of the photograph should be neutral (e.g. off-white in case of dark colors or grey in case of light colors) and should not have a shiny surface. If the photograph is taken indoors, then this should preferably be done in the same room and under artificial light conditions which will ensure identical and ample luminosity on repeated occasions over time. If a photograph has to be taken outdoors, then this should not be in direct sunlight but in a shaded area with as much indirect natural light as possible or on a cloudy day.

Precisions on growing conditions

8. The plants of the candidate variety appearing in the photographs should have been grown under standard growing conditions for the crop in question, as may have been indicated in the Technical Questionnaire (e.g. indoor, outdoor, season of the year). If this is not the case, then any possible alteration in the expression of the characteristic(s) appearing in the photographs must be specified (e.g. seasonal conditions may influence the color and pattern of fruit and flowers ~~of flowers in certain ornamental species, such as over coloring in apple according to outdoor light intensity and night temperatures, delphinium grown either outdoors or indoors~~). Furthermore, the photographs must not illustrate the original bred or discovered plant, or in the case of a new mutation or sport the plant part from which the variety originated. Instead, the photograph supplied must be based upon plants or trees propagated from the original plant or plant part.

Plant organs to be displayed

9. The photographs should show the plant parts which are a distinguishing feature of the candidate variety, as well as those of the whole plant and the most important commercial organs (flower, fruit, etc.). If the distinctive features of the candidate variety are very specific (e.g. seed size, shape of leaf/flower/fruit, length of awns, color pattern of flower/fruit, etc.) it is recommended to remove these plant parts from the plant and take a well-focused close-up photograph of them.

Similar varieties

10. ~~If~~ ~~Although not a requirement, the applicant may wish~~ ~~wishes~~ to illustrate differences between the candidate variety and the variety thought to be the most similar by the applicant as nominated by him/her under point 6 of the Technical Questionnaire, ~~it may be useful to by~~ providing photographs of the candidate variety alongside the aforesaid similar variety. In such photographs, the distinguishing plant parts of the candidate variety should be photographed alongside the same plant parts of the nominated similar variety. ~~In order to have consistency in the display of such photographs for the use of the examination office, the candidate variety must always be on the left side of the photograph taken alongside the similar variety; special care must also be taken that both the candidate variety and the similar variety are correctly labeled.~~ Where there is more than one similar variety named by the applicant, a separate photograph of the relevant plant parts of the candidate variety and each of those of the similar varieties could be provided.

Labeling

11. To avoid any possible mix-up of photographs with other candidate varieties in the DUS trial, the candidate variety (and where relevant the similar variety) appearing in a photograph must be clearly labeled with the breeder's reference and/or (proposed) variety denomination; trade names may be used only in addition to the breeder's reference and/or (proposed) variety denomination.

Metric scales

12. A metric scale in centimeters – also millimeters where a close-up photograph has been taken – should ideally appear along the horizontal and vertical margins of the photograph. ~~If in ornamental species the photograph illustrates the color of the flower of the candidate variety, it is useful to display the relevant sheet of the RHS colour chart with the corresponding color alongside.~~

Color characteristics

13. For ornamental species, it should be noted that whilst a photograph may broadly depict color, reference to the relevant RHS Colour Chart placed alongside the pertinent plant organ (e.g. flower) provides greater precision. For other crop sectors, industry-recognized color charts can also be displayed alongside the pertinent plant organ (e.g. apple fruit). Likewise, the color itself of the plant organ may not be the most representative feature of the candidate variety but rather the color pattern (e.g. pattern of over color in apple fruit, stripes/spots/netting in phalaenopsis), and this can be well illustrated in a clear photograph.

~~Photographs should be taken under adequate light conditions and with an appropriate background. It is preferable to have photographs taken indoors, since one can ensure homogenous photographic conditions irrespective of the type of photographs and number of candidate varieties supplied by the same applicant. The background of the photograph should be neutral (e.g. off white in case of dark colours or grey in case of light colours) and not reflect light. If the photograph is taken indoors, then this should preferably be done in the same room and under artificial light conditions which will ensure identical and ample luminosity on repeated occasions over time. If a photograph has to be taken outdoors, then this should not be in direct sunlight but in a shaded area with as much indirect natural light as possible or on a cloudy day.~~

Guidance Note in association with Additional Standard Wording for drafters of Test Guidelines

14. It is proposed to add the following guidance in document TGP/7 in conjunction with the ASW proposed above: The submission of photographs of a candidate variety together with the Technical Questionnaire is an obligation by many PBR authorities in order to have a complete PBR application.

“Photographs should only be requested by PBR authorities if this would serve to supplement the information in the Technical Questionnaire. The purpose of the photograph is to provide useful and discriminatory information about the candidate variety for the organization of the DUS technical examination. The photograph may be published in the PBR authority's Official Journal to inform third parties of the details of new applications. The information provided by photographs submitted by the applicant/breeder may in particular be useful for ornamental and fruit species, but certain other agricultural and vegetable species can also

benefit from having photographs in order to have an optimal DUS trial design. In essence, the photographs complement the information furnished in the technical questionnaire and provide visual information on how a variety may be distinct from similar varieties of common knowledge, thereby assisting in the determination of reference varieties to be included or excluded in the DUS trial.”

CONSIDERATION BY THE TECHNICAL COMMITTEE

15. The Technical Committee (TC), at its forty-seventh session, held in Geneva from April 4 to 6, 2011, agreed that further consideration should be given to the nature of the guidance of the document in order to avoid setting requirements that were not realistic for breeders. It was also agreed that the relationship between the characteristics in the Technical Questionnaire and the photographs should be clarified and that paragraphs 8, 11 and 12, as set out in this document, should be reviewed (see document TC/47/26 “Report on the Conclusions”, paragraphs 69 and 70).

Comments of the Technical Working Parties in their session in 2011

16. At its fortieth session, held in Brasilia, Brazil, from May 16 to 20, 2011, the Technical Working Party for Agricultural Crops (TWA) considered document TWA/40/12 and proposed the following amendments:

- (a) ASW 16 to read as follows:

“A representative color photograph (image) of the variety displaying its main distinguishing feature(s), ~~must~~^{should}³ accompany the Technical Questionnaire. [A photograph provided according to the specified requirements (see [authority reference to be added])~~in an appropriate format~~ will help the examination authority to prepare its examination of distinctness in a more efficient way, by giving a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire. The information provided by the photograph may be used in the selection of the most appropriate similar varieties of common knowledge to be grown alongside the candidate variety in the trial, as well as to place group the variety optimally within the DUS trial. ~~For greater details, please consult the following weblink: www.[.....].#”~~

- (b) title of paragraph 7 of document TWA/40/12 to be amended as follows:

“Optimal photographic environment”

- (c) to delete the last two sentences of paragraph 8 of document TWA/40/12:

“Precisions on growing conditions

“8. The plants of the candidate variety appearing in the photographs should have been grown under standard growing conditions for the crop in question, as may have been indicated in the Technical Questionnaire (e.g. indoor, outdoor, season of the year). If this is not the case, then any possible alteration in the expression of the characteristic(s) appearing in the photographs must be specified (e.g. seasonal

Authorities may include this section, duly completed, if appropriate

conditions may influence the color and pattern ~~of fruit and flowers of flowers in certain ornamental species, such as over coloring in apple according to outdoor light intensity and night temperatures, delphinium grown either outdoors or indoors).~~ Furthermore, the photographs must not illustrate the original bred or discovered plant, or in the case of a new mutation or sport the plant part from which the variety originated. Instead, the photograph supplied must be based upon plants or trees propagated from the original plant or plant part.”

- (d) to delete the beginning of paragraph 11 of document TWA/40/12:

“Labeling

“11. ~~To avoid any possible mix up of photographs with other candidate varieties in the DUS trial, the candidate variety (and where relevant the similar variety) appearing in a photograph must be clearly labeled with the breeder’s reference and/or (proposed) variety denomination; trade names may be used only in addition to the breeder’s reference and/or (proposed) variety denomination.”~~

17. The TWA agreed that the examples for guidance as photographs for specific crops could be provided in a new annex to document TGP/7. The experts from Japan informed the TWA that such guidance was available and could be provided to be incorporated in that annex.

- (i) *Quantity of plant material required*

The comments are reported in document TWA/40/23 “Report”, paragraphs 15 and 16.

[Endnotes follow]

¹ The Technical Working Party on Automation and Computer Programs (TWC), at its twenty-eighth session, held in Angers, France, from June 29 to July 2, 2010, considered document TWC/28/19 (paragraphs 1 to 9 of this document) and made the following comments (see document TWC/28/36 “Report”, paragraph 40):

paragraph 9	<ul style="list-style-type: none"> - to revise the first sentence to refer only to aspects affecting the image captured by the photograph and to introduce a separate sentence to address aspects affecting the reproduction of the image (e.g. resolution of the screen on which the image is viewed) - to replace “an imprecise picture” with “such factors”
paragraph 9 (vi)	to modify the final sentence to apply to situations other than flower color in ornamental plants and to consider adding the possibility of using a standard color check chart , instead of the RHS Colour Chart
paragraph 9 (vii)	<ul style="list-style-type: none"> - to replace “and not reflect light” to “should not have a shiny surface”, for example - to add an explanation that there should be uniform light distribution over the object to be photographed, and to give examples of how that might be achieved, e.g. by a light tent

The Technical Working Party for Vegetables (TWV), at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, considered document TWV/44/19 (paragraphs 1 to 9 of this document) (see document TWV/44/34 “Report”, paragraphs 49 to 51).

The TWV agreed that the sentence in paragraph 9 (v) “In order to have consistency in the display of such photographs for the use of the examination office, the candidate variety must always be on the left side of the photograph taken alongside the similar variety; special care must also be taken that both the candidate variety and the similar variety are correctly labeled.” should be reviewed, because it was not necessarily the case that examination offices specified that the candidate variety must always be on the left side.

The TWV noted the concerns of ISF concerning a requirement for photographs to be required for vegetable crops, especially as a failure to provide such a photograph could result in a rejection of an application. In particular, it noted the emphasis by ISF on the need to clarify that photographs should only be requested if they would supplement the information provided in the Technical Questionnaire. In that regard, ISF considered that a photograph should be attached to the variety description by the authority if an applicant was required to provide a photograph with the Technical Questionnaire.

The Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its forty-third session, held in Cuernavaca, Morelos State, Mexico, from September 20 to 24, 2010, considered document TWO/43/19.

The TWO agreed that the document should be structured into sections with titles concerning the various aspects (e.g. format, background etc.) and illustrative examples should be provided. It agreed that more emphasis should be placed on the importance of providing information on shapes and color patterns and less emphasis on color. It was further agreed that it should be emphasized that it was not a requirement to provide photographs of the candidate variety alongside the nominated similar variety and agreed that the requirement that the “candidate variety must always be on the left side of the photograph taken alongside the similar variety” (see paragraph 9 (v)) should be deleted. With regard to the proposal of the Technical Working Party on Automation and Computer Programs (TWC) to consider adding the possibility of using a standard color check chart, instead of the RHS Colour Chart (see paragraph 9 (vi)), the TWO clarified that the use of such a standard color check chart would not be instead of the RHS Colour Chart. The TWO also agreed that the document should refer to the applicant rather than the breeder.

The Technical Working Party for Fruit Crops (TWF), at its forty-first session, held in Cuernavaca, Morelos State, Mexico, from September 27 to October 1, 2010, considered document TWF/41/19.

The TWF agreed that the document should be structured into sections with titles concerning the various aspects (e.g. format, background etc.) and illustrative examples should be provided. It was also agreed that it should be emphasized that it was not a requirement to provide photographs of the candidate variety alongside the nominated similar variety and agreed that the requirement that the “candidate variety must always be on the left side of the photograph taken alongside the similar variety” (see paragraph 9 (v)) should be deleted. With regard to the proposal of the Technical Working Party on Automation and Computer Programs (TWC) to consider adding the possibility of using a standard color check chart, instead of the RHS Colour Chart (see paragraph 9

(vi)), the TWF noted that the use of such a standard color check chart would not be instead of the RHS Colour Chart. The TWF also agreed that the document should refer to the applicant rather than the breeder.

With regard to the proposed new text for ASW 16, as set out in document TWF/41/19, the TWF agreed that it should be amended to read:

“A representative color photograph (image) of the variety, displaying its main distinguishing feature(s), must accompany the Technical Questionnaire. A photograph provided according to the specified requirements (see ... [authority reference to be added]) will help the examination authority to prepare its examination of distinctness in a more efficient way by giving a visual illustration of the candidate variety. The information provided by the photograph may be used in the selection of the most appropriate varieties of common knowledge to be grown alongside the candidate variety in the trial, as well as to group the variety optimally within the DUS trial.”

The TWF agreed that further consideration would need to be given to the Additional Standard Wording (ASW) in document TGP/7, and in the Test Guidelines, in order to enable the requirements of individual authorities to be provided.

² ~~Strikethrough~~ (deletions)/Underlining (additions) (highlighted in yellow) indicate amendments proposed by the Enlarged Editorial Committee at its meeting on January 6, 2011.

[End of Endnotes and of document]