



TWA/34/3

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
AGRICULTURAL CROPS**

**Thirty-Fourth Session
Christchurch, New Zealand, October 31 to November 4, 2005**

TGP DOCUMENTS

Document prepared by the Office of the Union

1. The purpose of this document is to provide an update on developments concerning the development of TGP documents.

Program for the Development of TGP Documents

2. At its forty-first session, held in Geneva from April 4 to 6, 2005, the Technical Committee (TC) approved the program for the development of TGP documents, as set out in the Annex to document TC/41/5 Add. Further information concerning certain of the TGP documents is presented below.

TGP Documents Considered for Adoption by the Technical Committee at its Forty-First Session

Documents adopted by the Technical Committee (TC)

3. The TC adopted the following documents at its forty-first session:

TGP/0	List of TGP Documents and Latest Issue Dates
TGP/2	List of Test Guidelines Adopted by UPOV
TGP/5	Experience and Cooperation in DUS Testing (Sections 1-10)
TGP/6	Arrangements for DUS Testing (Sections 1-3)

Basis for the adoption of TGP/5

4. The TC noted that sections 1 to 7 of TGP/5 represented texts which were contained in the UPOV publication 644(E) "Important Texts and Documents". It observed that some of those texts had been adopted several years ago and would benefit from updating. However, it recognized that those texts had been adopted by UPOV and also noted that UPOV publication 644(E) was no longer available and that many new members of the Union did not have easy access to those texts. Therefore, it approved sections 1 to 7 but, in addition, agreed to develop a program for updating of those sections, based on priority, in conjunction with the CAJ and Council, as appropriate. The Office of the Union (Office) agreed to prepare a proposal for consideration by the TC at its forty-second session. With regard to elements, which should be considered in any revision to the texts, the following comments were made:

- (a) to make suitable provisions for genetically modified varieties in relevant sections;
- (b) in Section 1 "Model Administrative Agreement for International Cooperation in the Testing of Varieties":
 - (i) to review Article 6 with regard to the possibility to include the maintenance of reference collections in the main agreement rather than as a matter to be settled between the authorities by correspondence;
 - (ii) to review Article 7 with regard to the amount of 350 Swiss francs;
- (c) in Section 5 "UPOV Request for Examination Results and UPOV Answer to the Request for Examination Results": to consider amending the wording in the "UPOV Answer to the Request for Examination Results", paragraphs 5 and 6, to reflect the possibility for invoicing to be made directly to breeders.

5. The TC approved Section 10 "Notification of Additional Characteristics" of document TGP/5 on the basis that:

- (a) the date of submission of the additional characteristics would be included in the table;
- (b) the status of additional characteristics would be made clear on the UPOV website;
and

(c) there would be a review of the notification of additional characteristics on the UPOV website after three years of operation.

Documents not adopted

6. TGP/3 “Varieties of Common Knowledge”: the TC noted that, although document TGP/3/1 Draft 2 “Varieties of Common Knowledge” had been adopted by the Council, the Enlarged Editorial Committee (TC-EDC) had wondered whether the document went beyond what was contained in the General Introduction in terms of practical clarification in relation to varieties of common knowledge. The TC agreed that it would be better to try to elaborate a more practical and comprehensive document in respect of varieties of common knowledge in conjunction with the CAJ.

7. TGP/12 Section 2 “Chemical Constituents: Protein Electrophoresis”: the TC agreed that TGP/12 Section 2 “Chemical Constituents: Protein Electrophoresis” should not yet be adopted and should be brought forward for adoption in conjunction with the other sections of TGP/12 in due course.

Other TGP Documents Discussed by the TC

TGP/4 “[Constitution and] Management of Variety Collections”

8. The TC agreed the text as presented in document TGP/4/1 Draft 4, and agreed that it should be circulated to the Technical Working Parties (TWPs) at their sessions in 2005 on the basis that it represented the agreed situation in the TC.

TGP/9 “Examining Distinctness”

9. On the basis of the amendments agreed by the TC to document TGP/9/1 Draft 3 at its forty-first session, document TGP/9 Draft 4 has been prepared for consideration by the TWPs at their sessions in 2005.

TGP/7 “Development of Test Guidelines”

10. The first version of Annex 4 “Collection of Approved Characteristics” to document TGP/7 “Development of Test Guidelines”, has now been developed using Test Guidelines adopted in 2004 and 2005. A demonstration of how that collection can be used in conjunction with the electronic TG Template, i.e. the “drafter’s kit” in order to develop UPOV Test Guidelines, will be made at the TWP sessions in 2005.

11. In order to assist individual authorities to develop national / territorial guidelines from the UPOV Test Guidelines, Word versions of the adopted UPOV Test Guidelines will be made available on the first restricted area of the UPOV website.

12. At its forty-first session, the TC recalled that a new section on the development of individual authority Test Guidelines would be developed in future. Furthermore, it noted that during their sessions in 2004 the TWPs had, in the light of their experience, highlighted certain elements of the existing text which might be refined during a future revision and also

indicated where additions of new guidance notes or additional standard wording might be developed.

13. The following is a summary of the proposals which have been made:

Amendments to the Current Text

14. It has been suggested, by the TWP indicated in brackets, to consider modification of the text as follows:

(a) ASW 4 — 2(d): Observation of color by eye

to add that the color chart and the version of the color chart used should be specified with the variety description (TWF: document TWF/35/11, paragraph 54);

(b) GN 20 — Presentation of characteristics: States of expression according to type of expression of a characteristic

to clarify that adjectives such as moderately, medium, etc. (e.g. much smaller (1), moderately smaller (3), etc. / light green (1), medium green (2), etc.) should be used for pseudo-qualitative characteristics and for quantitative characteristics where there are one or more fixed states (Office in communication with Mrs. Elise Buitendag (South Africa), Coordinator of document TGP/7);

(c) GN 20.3 — Quantitative characteristics

to provide guidance on the use of a scale with more than 9 notes (TWA: document TWA/33/16, paragraph 67).

New Additional Standard Wording (ASW)

15. It has been suggested, by the TWP indicated in brackets, to seek to develop Additional Standard Wording (ASW) for the following situations:

(a) Chapter 1 of the Test Guidelines: Subject of these Test Guidelines

(i) where there are separate Test Guidelines for different types of variety within the same genus/species (TWF: document TWF/35/11, paragraph 55);

(ii) for Test Guidelines for rootstock varieties which do not include flower or fruit characteristics (TWA: document TWA/33/16, paragraph 31);

(iii) for Test Guidelines covering hybrids with species / genera which are covered by other Test Guidelines (TWF: document TWF/35/11, paragraph 40).

(b) Chapter 8

to provide a standard definition of time of eating maturity (TWF: document TWF/35/11, paragraph 54).

16. The TC agreed that, where proposals to update document TGP/7/1 “Development of Test Guidelines” were agreed by the TC, document TGP/7/1 should be revised and a new version adopted (TGP/7/2 in the first instance). Such revisions would then be incorporated in the electronic template and drafters’ kit.

Publication of Adopted TGP Documents

17. The TC noted that the adopted TGP documents would be published in a special section within the freely accessible part of the UPOV website. It also heard that document TGP/7/1 “Development of Test Guidelines” would be placed in that section.

Comments on TGP documents by the Technical Working Parties in 2005

18. As indicated in the Annex to document TC/41/5 Add., there are a number of TGP documents which are being considered by more than one TWP in 2005. As in previous years, the comments of the TWPs which have held earlier sessions are being reported at the subsequent TWP sessions. The comments made by the Technical Working Party for Vegetables (TWV) at its thirty-ninth session held in Nitra, Slovakia, from June 6 to 10, 2005, the Technical Working Party on Automation and Computer Programs (TWC) at its twenty-third session held in Ottawa, Canada, from June 13 to 16, 2005, the Technical Working Party for Fruit Crops (TWF) at its thirty-sixth session held in Kôfu, Japan, from September 5 to 9, 2005 and the Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its thirty-eighth session held in Seoul, Republic of Korea, from September 12 to 16, 2005 are reported in the annexes to this document for the following TGP documents:

- Annex 1: document TGP/4/1 draft 4 “Constitution and Management of Variety Collections”
- Annex 2: document TGP/9/1 draft 4 “Examining Distinctness”
- Annex 3: document TGP/10/1 draft 1 “Examining Uniformity”
- Annex 4: document TGP/8/1 draft 1 “Use of Statistical Procedures in DUS Testing”
- Annex 5: document TGP/13 draft 3 “Guidance for New Types and Species”

[Annexes follow]

ANNEX 1

COMMENTS OF THE TWC, TWF, TWO AND TWV ON
DOCUMENT TGP/4/1 DRAFT 4 “CONSTITUTION AND MANAGEMENT OF VARIETY
COLLECTIONS”

Section	Comment	TWP
General	“plant material” and “material” to be replaced by “living plant material” throughout the document	TWO
Section 1	It was agreed that the introduction should explain the logic and reasoning behind the process of narrowing-down of the varieties of common knowledge in a way which inexperienced readers would understand and, in particular, to explain that the process avoided the need for side-by-side comparisons.	TWF
Sections 1 and 2	To be indicated that a variety collection needs to be continuously updated and, in particular, needs to be reviewed in relation to each new variety application.	TWF
1.3 (b)	to be amended to read “where required, the necessary living plant material can be included in the growing tests and trials, or supplementary procedures in place to avoid the need for a systematic individual comparison”	TWO
2.1	to be amended to read “Thereafter, for inclusion in the variety collection, the variety should be a variety of common knowledge, adequately described and suitable living plant material of the variety should be available for inclusion in the growing tests or other trials, or supplementary procedures in place to avoid the need for a systematic individual comparison.”	TWO
2.1.1.2 (i)	to update the Test Guidelines reference numbers for apple and add a reference to the Test Guidelines for ornamental apple	TWF
2.1.1.2 (i)	“establishment” to be replaced by “existence”. To include the Test Guidelines for Ornamental Apple and to update the TG references.	TWO
2.1.1.2 (ii)	final sentence to be deleted	TWO
2.1.1.4	second sentence to read “If it is decided to use this approach in the examination of hybrids, the variety collection should include varieties used as components (generally inbred lines) of those hybrid varieties.”	TWO
2.1.2	to include the use of panels of experts	TWO

Section	Comment	TWP
2.1.2.1	to be revised to clarify that it is not necessary or possible to include all the varieties covered by the items in paragraphs (i) to (vi) and to explain that it was necessary for experts to make a judgment on the basis of experience and expertise. It was agreed that the section should explain that inexperienced variety collectors should be encouraged to consult variety collectors within UPOV with the necessary experience and expertise.	TWV
2.1.3.1	to read “Thus, to be included in a variety collection, a variety should be adequately described and suitable living plant material should be available, if required, for growing tests or other trials, or supplementary procedures in place to avoid the need for a systematic individual comparison.”	TWO
2.1.3.1 (b)	second sentence to read “However, in other cases, for example, the variety collector may only obtain living plant material of varieties as and when those varieties need to be included in growing tests or other trials as a part of the examination of distinctness and may not maintain any living plant material collection himself or may use supplementary procedures to avoid the need to obtain living plant material for a systematic individual comparison.”	TWO
2.1.3.2 (iii)	the word “field” to be deleted from the penultimate sentence	TWF
3.1 (b)	to read “a representative sample, or a procedure for successfully obtaining a representative sample, of living plant material of each variety, or supplementary procedures in place to avoid the need for a systematic individual comparison.”	TWO
3.1.2.1.2	to be revised to explain that involvement of the breeder should always be considered but, in the case of material of parent lines submitted as a part of the examination of a candidate hybrid variety, material should only be made available to other authorities and other DUS examiners in such a way that the legitimate interests of the breeder would be safeguarded. It was agreed that any relevant recommendations developed by the Administrative and Legal Committee (CAJ) should be incorporated in the section.	TWV
3.1.2.1.1	to consider deleting the second row referring to authority responsible for the official register or to add an “X” to at least the columns for protected varieties and varieties on the market, since those authorities may have such varieties	TWF
3.1.2.3.1	first sentence to be deleted	TWF
3.1.2.3.2	to be deleted	TWV

ANNEX 2

COMMENTS OF THE TWC, TWF, TWO AND TWV ON
DOCUMENT TGP/9/1 DRAFT 4 “EXAMINING DISTINCTNESS”

Section	Comment	TWP
General	to include a glossary of abbreviations used in the document, e.g. QL, PQ, QN, VS, VG, MS, MG.	TWC
Schematic overview (page 6)	to amend “multivariate analysis” to read “phenotypic distance”.	TWC
1.3	to be updated according to changes in TGP/4	TWO
1.5	flow diagram to be retained in TGP/9, even if reproduced in TGP/1 “General Introduction With Explanations“	TWO
Section 2: Introduction	to consider adding “The most important consideration in selecting varieties for inclusion in the growing trial is the identification of the most similar varieties of common knowledge. Once identified, at least the most similar varieties should be included in the variety collection and the growing trial. Other similar varieties may be excluded on the basis of grouping characteristics”	TWF
Section 2	to include a recommendation for inexperienced experts to consult experienced experts within the members of the Union	TWO
	to provide an explanation of how to select varieties for inclusion in the growing trial when there is relatively little data on varieties in the variety collection. Elizabeth Scott (United Kingdom) and Jean Maison (European Community), in conjunction with other interested experts, to provide a draft to the Office by the end of September.	TWO
	to include the use of panels of experts as a basis for selecting varieties for the growing trial	TWO
2.1	to consider explaining that the types may, or may not be, types or groups identified within the Test Guidelines.	TWF
2.2	to add section 5.3.1.1 from the General Introduction (document TG/1/3)	TWF
2.2	to be revised to cover situations where grouping characteristics were not used e.g. where the candidate variety was grown in the first year without the inclusion of varieties of common knowledge in the growing trial and information obtained in the first year was used in the second year.	TWV
2.2.2.2	“(first)” to be deleted	TWF
2.2.2.2	to clarify that, in some cases, Technical Questionnaire characteristics are not intended to be used as grouping characteristics	TWF

Section	Comment	TWP
2.2.3	in accordance with the proposal of the TWV, to provide a more realistic example of grouping. The TWF also agreed that it should be clarified that, in some cases, there are many candidate varieties and the grouping may become more complex.	TWF
2.2.3.1	to be amended to provide a more realistic example, where grouping is performed using quantitative characteristics and non-grouping characteristics, e.g. UPOV technical questionnaire characteristics, national technical questionnaire characteristics, other characteristics and information provided by the breeder in sections 6 and 7 of the Technical Questionnaire. In addition, to explain that inexperienced DUS examiners could consult experts within UPOV to obtain advice on the process of grouping for particular crops / species.	TWV
2.2.3.2	to be revised to reflect the fact that it is not necessary to repeat the grouping used in the first growing cycle and that, in the second year, it is a matter of selecting only very similar varieties.	TWV
2.2.3.2	to reflect the fact that, for some crops e.g. fruit trees, there is no re-planting of the trial in the second growing cycle, although it is still possible to “group” in the sense of ignoring varieties in the trial which are already considered to be distinct.	TWF
2.2.3.2	to replace “trial” with “cycle”	TWF
2.2.3.2	to clarify that, in order to obtain sufficient information for the examination of distinctness, a second growing cycle may be necessary for some varieties where the normal procedure for the species concerned is a single growing cycle	TWO
2.2.3.2.2	table 5.1: note “9” for Candidate variety B to read note “2”.	TWC
2.2.3.2.5	to read “It may also be possible to use further characteristics for grouping in the second growing cycle, because the grouping will be based on observations obtained from the same growing trial, i.e. the first growing trial.”	TWC
2.3	title to read “Phenotypic distance”	TWC
2.3	title to read “Phenotypic distance estimation”	TWF
2.3.1.1, 2.3.1.2	to delete reference to multivariate analysis and revise the text accordingly	TWC
2.3.2.1.1	the TWC considered whether a more appropriate word than “calibrated” might be found, but concluded that the word “calibrated” could be accepted. It was agreed that paragraphs 2.3.2.1.2 to 2.3.2.1.10 should be preceded by a brief explanation that those subsections would explain the elements within the GAIA method. The text would be provided by the expert from France.	TWC

Section	Comment	TWP
2.3.2.2	to read “Other methods”	TWC, TWF
2.3.2.2	to consider adding “There are a range of other statistical methods in use in agricultural research that can be used in the examination of distinctness. Those include ANOVA and multiple range tests. Providing the underlying assumptions are met, those other statistical methods are as acceptable as the other methods mentioned in this section.”	TWF
2.4.2	first sentence to read “Photographs can provide useful information”	TWO
After 2.4	to consider including the supplementary methods set out in Chapter 6, except for randomized “blind” testing, and also adding the advice of breeders.	TWF
3	to introduce a section explaining the possibility that, as explained in TGP/7, additional tests, for examining relevant characteristics, may be established.	TWV
3.2.2	to read “When varieties are grown in successive years...”	TWC
3.2.2	to explain that the notion of “independence” is related to statistical approaches.	TWO
3.2.3	second sentence to read “In such cases, the independence of growing cycles is considered to be satisfied”.	TWC
3.2.4 / 3.2.5	second sentence of 3.2.5 to be deleted and to clarify that, where the two growing cycles are conducted in the same year and at the same time, it is necessary for there to be a suitable distance or a suitable difference in growing conditions between the two locations to ensure their independence. Similarly, in cases where the two growing cycles were in the same location and the same year, it should be explained that there should be a suitable time period between plantings to ensure the independence of the growing cycles. It was noted that the intention was to ensure that different replications in the same trial were not treated as independent growing cycles.	TWV
3.4	first sentence to read “The Test Guidelines may specify the type/s of plot for the growing trial ... ”	TWV
3.5	title to read “Organizing the growing trial layout”	TWF
3.5	to include the possibility of using information provided by the breeder in sections 6 and 7 of the Technical Questionnaire of the Test Guidelines.	TWV
3.5	to add sections for supplementary methods, the advice of breeders, including the information provided in the Technical Questionnaire.	TWO

Section	Comment	TWP
3.5.1.3, 3.5.1.4	to use an example which does not use color groups, in order to avoid confusion between color groups and groups within the trial.	TWC, TWF
After 3.5	to consider including the supplementary methods set out in Chapter 6, except for randomized “blind” testing, and also adding the advice of breeders.	TWF
4	title: spelling of “characteristics” to be corrected	TWF
4.	to note that the definition of the terms in section 4.1 differ from those used in TGP/7 and to consider any consequences of this changed definition for TGP/7. The TWV noted that the new definitions and explanations were very clear, but clarified that the terms were only concerned with the form of the data produced and did not provide any guidance to examiners on whether, for example, an MG observation should involve the observation of several individual plants or could be done by a single global assessment of the plot. It agreed that such advice was important in the context of the Test Guidelines, which were aimed at DUS examiners.	TWF
4.1	to retain the indication of whether a characteristic should be observed visually (V) or measured (M), but not to include any indication of whether the observation should be made on single, individual plants or on groups of plants. It was noted that any reference to individual plants, if retained, should also make reference to parts of plants.	TWF
4.1	the TWO noted that an indication of whether a characteristic should be visually observed or measured might be useful in some circumstances, but did not consider that it should be obligatory in all Test Guidelines. It considered that an indication of whether observations should be made on individual plants or groups of plants and whether a single record or multiple records should be kept would be inappropriate for Test Guidelines covering ornamental plants. It noted the importance of example varieties as the basis for observing characteristics and suggested that Section 4 should emphasize the importance of establishing sets of example varieties for all characteristics, including UPOV non-asterisked characteristics, at the national or regional level. It noted that section 4 would need to be substantially revised and did not consider the section in detail.	TWO
4.1.3	to add “counts” as an additional example of a measurement.	TWC
4.1.8	to delete the sentence “Normally the same data can be used for distinctness and for the variety description.”	TWC

Section	Comment	TWP
4.2.1.1.(b)	to read “For the assessment of distinctness, visual observations require sufficient variation between varieties, and a low level of variation within varieties. Measurements provide a higher level of information. The features of propagation determine the level of genotypic variation within varieties. Vegetatively propagated, truly self-pollinated and mainly self-pollinated varieties normally have relatively little variation within varieties. Within cross-pollinated and synthetic varieties, variation is normally greater than for self-pollinated and vegetatively propagated varieties, especially in quantitative and some pseudo-qualitative characteristics.	TWC
4.3.1	to consider deleting all references to the assessment of uniformity. Barley (self-pollinated): to amend from “VS” to “VG”.	TWC
4.3.2.2	to read “In the case of barley, distinctness for the characteristic “Plant: length” is usually based on a single record for each variety. The individual measurements within a plot determine the mean plot value and those measurements are not considered for further evaluations. [Uniformity in this example is assessed on the basis of off-types, which are observed visually].”	TWC
5.3.3.2.1	final sentence to read “The tests in each year are based on Student’s two-tailed t-test of the variety means with standard errors estimated using the plot residual mean square from the analysis of the variety x replicate plot means.”	TWC
5.3.2.2.2	to change “meets” to “meet”	TWF
5.3.4	to be placed before section 5.3.3	TWO
5.3.4.1	to explain that a difference of two notes in a quantitative characteristic, for varieties grown in the same trial, would be a suitable basis for distinctness, where the range of notes was 9 notes or less (e.g. 1-9, 1-5, 1-3)	TWO
5.5	to be moved to section 2, or a reference to be made in Section 2	TWF
5.6	to delete the e.g.s “Chi square” and “COY; 2 x 1%” from VS and MS respectively	TWF
5.6.1	VG/MG row: to check if the term “repetition” is appropriate	TWC
6	to consider moving sections 6.2 “Publication of variety descriptions”, 6.3 “Cooperation between members of the Union” and 6.4 “The advice of plant experts” to section 2, or duplicating in Section 2.	TWF
6.4	subparagraph numbering (6.3.1 etc.) to be corrected.	TWC
6.3.4 (6.4.4)	to read “ <i>Randomized variety plots</i> : duplicate samples of the same variety receive individual codes and are randomly distributed in the trial.”	TWC

ANNEX 3

COMMENTS OF THE TWC, TWF, TWO AND TWV ON
DOCUMENT TGP/10/1 DRAFT 1 “EXAMINING UNIFORMITY”

Section	Comment	TWP
General	statistical methodologies to be moved to TGP/8 “Statistical procedures”	TWV, TWF
General	to review the content of the document with a view to providing a similar level of information to that provided in TGP/9/1 Draft 1.	TWC
General	It was agreed that the guidance on the criteria for determining off-types being developed on the basis of document TWF/36/7-TWO/38/9 would form a crucial part of TGP/10.	TWO
Page 2	3.1.13 instead of 3.2.13	TWC
1.1	To make reference to the General Introduction (document TG/1/3), Section 6.2 “Relevant characteristics”	TWF
1.1	to provide information on pseudo-qualitative characteristics	TWC
1.1.1	to consider stating that the environmental variation for pseudo-qualitative characteristics lies somewhere between that for qualitative and quantitative characteristics	TWF
1.1.1(c), (d)	to amend “genotypical” to “genotypic”	TWF
1.1.3	to consider replacing reference to discontinuous and continuous variation with reference to qualitative and quantitative characteristics	TWF
1.1.3	to be further elaborated to avoid possible confusion between variation in the expression of a characteristic for a variety and variation in expression for a characteristic across varieties	TWC
1.2	to include guidance on determining off-type plants (see discussions on document TWF/36/7-TWO/38/9)	TWF
1.2.2 (a)	to clarify what the experience relates to	TWC
1.2.2 (b), 1.2.3	to be deleted (see comments on document TWC/23/11)	TWC
1.2.5	remark to be deleted	TWC
1.2.5	to note that “10.3.x” does not exist	TWF
1.3.2	to read “[...] COYU is a suitable statistical method [...]”	TWC
1.3.2	to explain the background and purpose of the COYU method	TWO
1.3.3	“, long term LSD” to be deleted	TWC
1.3.3	Australia to provide examples for 1.6x variance and long term LSD	TWF
1.4.1	final sentence to be deleted	TWC

Section	Comment	TWP
1.4.2	final two sentences to be deleted	TWC
1.4.3	“(section 10.2.2)” to be deleted	TWC
2.1	detailed methodology and Appendix A to be moved to TGP/8	TWC
2.1.3.2	fifth bullet point: “s” at the end of “reference” to be deleted	TWC
3 General	detailed statistical methodology to be moved to TGP/8	TWC
3.1.1	to be revised into the form of a summary and moved to the end of Section 3	TWF
3.1.1.2	to be deleted	TWC
3.1.1.3	to be deleted	TWC
3.1.3.2	final sentence to be deleted	TWC
3.1.4	to review whether such an explanation is appropriate in the light of sample sizes used in the Test Guidelines. The document should reflect the positive experience in UPOV with the existing sample sizes.	TWF
3.1.5.16	to read “Schemes e and f both result [...]”	TWC
3.1.5.17, 3.1.5.18	to be further clarified	TWC
3.1.11.1	to replace “figures” with “values”	TWC
3.1.11.2	final sentence to read “Thus, the largest sample sizes in the range of sample sizes with a given maximum number of off-types should be used.”	TWC

[Annex 4 follows]

COMMENTS OF THE TWC, TWF, TWO AND TWV ON
DOCUMENT TGP/8/1 DRAFT 1 “USE OF STATISTICAL PROCEDURES
IN DUS TESTING”

Section	Comment	TWP
General	<p>the introduction and structure of TGP/8 to be based on the flow diagram in TGP/9, with indications of the stages at which statistical procedures could be applied. In addition, the reasons for the use of statistical procedures to be clarified at the beginning of the relevant links to the process of examining DUS.</p> <p>The TWV agreed that the Test Guidelines should specify if statistical methods were recommended for the DUS examination and, in cases where they were recommended, the type of analysis e.g. pair-wise comparisons.</p>	TWV
General	<p>The TWC agreed with the comments made by the TWV at its thirty-ninth session held in Nitra, Slovakia from June 6 to 10, 2005, that the structure of TGP/8 should be modified to follow the schematic overview of TGP/3, TGP/4 and TGP/9 as presented in TGP/9/1 Draft 4, showing where statistical methods could be applied as well as explaining the reasons for their use at the beginning of each section. It was agreed that, as proposed by the TWV, it would be useful to indicate in the relevant Test Guidelines if statistical analysis was appropriate.</p>	TWC
General	<p>The TWF discussed document TGP/8/1 Draft 1 and noted that, on the basis of the TWC comments, that there would be substantial changes to the document in its next draft. It, therefore, agreed to make only general comments on the document as follows:</p> <p>The TWF agreed with the TWV suggestion that the introduction and structure of TGP/8 should be based on the flow diagram in TGP/9, with indications of the stages at which statistical procedures could be applied. It also agreed that the reasons for the use of statistical procedures to be clarified at the beginning of the relevant links to the process of examining DUS. The TWF noted that the flow diagram in TGP/9 linked many TGP documents and proposed that reference should be made to the flow diagram in all the TGP documents and to consider making it the basis of TGP/1 “General Introduction With Explanations”</p> <p>The TWF agreed that it would be appropriate to consider if the Test Guidelines should specify if statistical methods were recommended for the DUS examination and, in cases where they were recommended, the type of analysis e.g. pair-wise comparisons.</p>	TWF

Section	Comment	TWP
General	The TWO discussed document TGP/8/1 Draft 1. It noted that there were a number of proposals from other Technical Working Parties which would require substantial revision of the document and did not have any additional proposals to those already made on the document.	TWO
Section 1 General	The TWC agreed that, in general, the wording should be modified to present the content as recommendation or proposal rather than making statements. It further agreed the following changes	TWC
1.5	to read “In those cases where specific ordering is required to observe a characteristic (e.g. comparison of color or architecture) one should be aware that this should be done in one replication, and one should be careful with conclusions on other measurements. This brings our focus to another case where some grouping is required from the statistical point of view because otherwise competition would influence the observation, e.g. early varieties would hamper the development of late ones.”	TWC
1.6	to delete “all” from the first sentence.	TWC
1.8	fourth sentence to read “A candidate variety can thus be compared with others using a criterion that includes this extra source of variation (variety-by-year interaction in combined-over-year ‘COY’ analysis).”	TWC
1.9	to delete the second and third sentences. The second example, using bulk samples to be replaced by a more typical example. Second paragraph: to delete “but also understood by a novice”	TWC
Section 2	The TWV agreed that TGP/8 should not start from an assumption that randomized, replicated trials are required and should also give equal emphasis to pair-wise comparisons.	TWV
2.1.4	To clarify the second sentence. To verify the definition of grouping characteristics according to the General Introduction. Seventh sentence to read: “In this way similar varieties are compared with each other in the trial.”	TWC
2.2.2	wording in table: row 2 / column 2 to read “two varieties non distinct for the characteristic” row 2 / column 3 to read “variety is uniform for the characteristic”	TWC
2.2.3	Second sentence to read “They are called type I error and type II error.”	TWC
2.3	Title of section 2.3 to read “Completely randomized design and randomized complete block design”	TWC

Section	Comment	TWP
2.3	To clarify that, for reasons of space, the diagrams showing the allocation of varieties of paragraphs 2.3.1, 2.3.2 and 2.3.3 four varieties are presented in two rows.	TWC
2.3.6	To read “Management may [...] For some crops it may be necessary also to have guard plants (areas) in order to avoid large competition effects. However, overly large plots is a waste of land and will often increase the random variability between plots. [...]”	TWC
2.4.1	To read “If the number of varieties becomes large (>20-40), it may be impossible to construct complete blocks that would be sufficiently homogeneous”	TWC
2.4.3	To delete the last sentence	TWC
2.5.1	second sentence to read “A similar theory to that used in split-plot designs may be used for setting up a design where the comparisons between certain pairs of varieties are to be optimized.”	TWC
3.4.2.1	To use an example of a non-quantitative characteristic.	TWC
Table 2	To modify the table for consistency with the following paragraphs.	TWC
3.6.2	final sentence before “Remark” to be reviewed	TWC
Table 3	To check the marks inside the boxes	TWC
Table 4	To delete the references “R”; “NR-P” and “NR-D”; To refer to “2 by 1%” instead of “2 out of 3 method” To delete threshold model.	TWC
Table 5	To delete the references “R”; “NR-P” and “NR-D”;	TWC
4.3.4	To make a reference to specific part of Section 2	TWC
4.3.6	To make a reference to specific part of Section 5	TWC
Section 5 General	To incorporate COYU as for COYD	TWC
General	To incorporate section “5.2 Other methods”.	TWC
5.1.3.2.1	to read “Dagnelie” (in lower case)	TWC
5.1.3.2.4	Last sentence to read “Otherwise it does not have a significant effect at the p% level.	TWC
6.2.6 and 6.3.4	To be presented as examples instead of in the main text of the document.	TWC
Section 7 General	The TWC noted that the GAIA software had been updated by the experts from France and agreed that the GAIA software could be made available through a link on the UPOV website.	TWC
	To delete the references to multivariate analysis and to refer to phenotypic distance.	TWC

Section	Comment	TWP
	There is a need to harmonize the wording of section 7 with the wording in section 3 (see on page 59: 7.4.1 ... qualitative, quantitative and electrophoretic characteristics and on following pages). Experts from France supported by the chairman have to harmonize the wording.	TWC
Appendix A4 General	To incorporate the missing sections from the previous version and to recreate the original structure.	TWC

[Annex 5 follows]

COMMENTS OF THE TWC, TWF, TWO AND TWV ON
DOCUMENT TGP/13 DRAFT 3 “GUIDANCE FOR NEW TYPES AND SPECIES”

Section	Comment	TWP
General	to explain the role of the Technical Working Parties in developing Test Guidelines for new types and species	TWV
2	to provide an explanation that a new UPOV code is likely to be required for genera and species in which there has not previously been DUS testing. It was noted that, in cases of doubt (e.g. where there had been reclassifications within genera), the allocation of the UPOV code might also play a significant role in identifying the appropriate botanical classification for applications.	TWO
2.1	to clarify that the guidance provided in TGP/13 was only relevant where there was no existing experience within UPOV. In all other cases, the testing authorities with relevant experience according to the information provided in TGP/5, should be contacted for assistance. It was also agreed that the document should highlight the potential problem of botanical synonyms and the need to avoid species being treated as new species when, in fact, it was an existing species presented under a botanical synonym.	TWV
2.1	to be revised to clarify that the document covered various possibilities of what might be considered as a “new” species, including: <ul style="list-style-type: none"> (a) species for which there had been no previous applications for protection within UPOV; (b) species for which there had been no previous applications for protection and/or no DUS testing for the authority concerned; and (c) species which had not previously existed (e.g. intergeneric and interspecific crosses and to reorganize the introduction accordingly	TWF
2.3.4	to explain how Test Guidelines could be developed by the Technical Working Parties in due course, if appropriate	TWF
2.4.2	to be deleted	TWO
2.4.3	it was agreed that, as proposed by the TWV, the text would need to be revised to avoid any indication that potential varieties of common knowledge could be discounted without consideration on a case-by-case basis.	TWF
2.4.3	it was noted that the text would need to be revised to avoid any indication that potential varieties of common knowledge could be discounted without consideration on a case-by-case basis.	TWV

Section	Comment	TWP
2.4.3	as a part of the review of 2.4.3, proposed by the TWF, it was agreed that care should be taken not to equate the notion of “common knowledge” with commercialization and to clarify that the absence of applications for PBR did not mean that there were no varieties of common knowledge.	TWO
3.3.1	to replace “grown” with “tested” in the final sentence	TWO
4	to clarify that new types of varieties related, in particular, to varieties propagated by methods which were new for the species concerned.	TWO, TWF
4.1	the TWO agreed that section 4.1 should, in particular, consider the situation where new methods of propagation were used for a species. It was noted that that should not be restricted to cases where seed-propagated varieties were developed where vegetatively propagated varieties were the normal case.	TWO

[End of Annex 5 and of document]