



TWF/32/20

ORIGINAL: English

DATE: July 11, 2002

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
FRUIT CROPS**

**Thirty-Second Session
Valencia, Spain, October 1 to 5, 2001**

REPORT

adopted by the Technical Working Party for Fruit Crops

Opening of the Session

1. The thirty-second session of the Technical Working Party for Fruit Crops (TWF) (hereinafter referred to as "the Working Party") was held in Valencia, Spain, from October 1 to 5, 2001. The list of participants is presented in Annex I to this report.
2. Mr. Florentino Juste, Director of the *Instituto Valenciano de Investigaciones Agrarias* (IVIA) (Agricultural Research Institute of Valencia), Spain, welcomed the participants to Valencia. The session was opened by Mr. József Harsányi (Hungary), Chairman of the Working Party.

Adoption of the Agenda

3. The Working Party adopted the agenda for its thirty-second session, which is reproduced in document TWF/32/1 Rev., after having agreed that, in order to streamline the preparation of Test Guidelines, a new procedure for the discussion of draft Test Guidelines and Working Papers would be introduced. The Working Party would provide time for discussion of the draft Test Guidelines and Working Papers in subgroups comprised of interested experts. On the basis of the information received from experts, it was agreed to

have two subgroups to allow the experts to participate in the discussion of the documents in which they had a particular interest. The composition of the subgroups (scheduled for October 2, 2001, (morning and part of the afternoon) and October 4, 2001, (afternoon)) was the following: Subgroup A: CITRUS: Grapefruit & Pummelos, Lemons & Limes, Mandarins, Oranges, Trifoliata Oranges; Annona Cherimola, Avocado, Persimmon, Prickly Pear (*Opuntia*), and Subgroup B: Apricot, European Plum, *Prunus* Rootstocks, Quince, Raspberry.

Short Reports on New Developments in Members of the Union in Plant Variety Protection in Fruit Species

4. The Working Party received short reports from experts on recent developments in their countries. In the majority of members of the Union represented at the meeting, the number of applications in fruit species was stable. Some experts reported an increase in the number of new species and inter-specific crop applications. The expert from Australia provided information on a training program for people using the breeder-based testing system, and on a system of publication of variety descriptions on the National Office Web site, which include a search function for all varieties for which a plant breeder's right had been granted.

5. UPOV officials reported on new members of the Union, those members which had adhered to the 1991 Act of the Convention and on the latest changes in the staff of the Office of the Union (hereinafter referred to as the "Office").

Important Decisions taken by the Technical Committee and Particularly Regarding Issues Raised at the Last Sessions of the Technical Working Parties

6. The Office presented a brief report on the main items discussed at the previous session of the Technical Committee and referred participants to the full report (document TC/37/8) for further details.

Ad hoc Crop Subgroup on Molecular Techniques

7. The Working Party reaffirmed its support for the establishment of an *ad hoc* crop subgroup for peach. It proposed that Mrs. Roberta Quarta (Italy) be notified of the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT) session and thereby encouraged to submit a paper on molecular characteristics in peach.

8. The Working Party also wished to consider the possibility of establishing a subgroup for citrus and suggested that this might be combined with the peach subgroup under a single Chairman. It decided to nominate Mr. Erik Schulte (Germany), as Chairman of the peach, or combined peach and citrus, subgroup if this was established. The Office advised that the first step would be the presentation of a paper or papers on molecular characteristics for citrus at the BMT. The BMT could then decide if there was sufficient, relevant information on which to propose the establishment of a crop subgroup.

Cooperation with the Tropical Fruit Network (TFNet)

9. The Working Party agreed that Japan would update the Office on their latest correspondence with TFNet. The Office, in conjunction with the TWF Chairman, would then consider how to take the matter forward. It would also advise TFNet that they were welcome to contact any UPOV member, or the Office, to arrange the drafting of Test Guidelines for crops of interest. Experts from Australia, Brazil, Italy, Japan, Mexico, South Africa and Spain expressed particular interest in possible cooperation.

Review of Draft Document TG/1/3 “Revised General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants”

10. The Working Party reviewed document TC/37/9(a), on the basis of the proposed amendments in document TWF/32/8 Add. and TWO/34/20, Annex I, and proposed that the text be further amended as in Annex II.

General Development of the TGP Documents

11. The Working Party reviewed document TWF/32/10 and modified the document, as shown in Annex III, to reflect the contribution it plans to make in the development of TGP documents.

Draft TGP/7 “Development of Test Guidelines”

12. The Working Party reviewed the draft standard wording for all Test Guidelines, as presented in document TC/37/10, Annex I, and proposed that the text be amended as shown in Annex IV.

13. The TWF proposed that section 3 “Conduct of Tests” and section 4 “Methods and Observations” should be combined into a new single chapter “Method of Examination.” In addition, it proposed that any advice regarding the observation of characteristics (e.g. timing or part of the plant to be observed) should be contained in section 8 “Explanations.”

14. The Working Party agreed to test the formula presented in section 2.3 of TC/37/10, Annex I, and to decide if it was appropriate.

15. The Working Party discussed the need for the inclusion of grouping characteristics and concluded that these were not necessary for Distinctness, Uniformity and Stability (DUS) examiners in an “official” testing system, because the characteristics used for grouping would be those provided by the applicant in the Technical Questionnaire (TQ). However, it was noted that they might be of interest for DUS examiners in a breeder-based testing system, where the UPOV type TQ was not used. It concluded that, having clarified the matter, further elaboration of the criteria for selecting grouping characteristics was required and drafted the wording which is presented in Annex IV: (Technical Questionnaire, Section 5.2).

16. Where necessary, it was considered appropriate to simplify the Test Guidelines characteristics for inclusion in the TQ.

17. The Working Party considered that example varieties were not necessary for qualitative characteristics and did not need to be provided, if illustrations were included. It was not certain whether example varieties were necessary for pseudo-qualitative characteristics and this would be reconsidered at its 2002 session.

18. After considering the draft standard wording for all Test Guidelines, as presented in document TC/37/10 Annex I, the Working Party started to review the guidance notes and standardized optional wording contained in document TWF/32/9 Rev. It had insufficient time to review the document completely and decided to discuss certain issues which it considered were most in need of clarification. These were: the presentation of quantitative characteristics; the description of apex/tip characteristics; the clarification of the time of maturity.

19. The Working Party agreed that the following ranges, for states of expression of quantitative characteristics, should be accepted.

1 (e.g. absent to very weak)	1 (e.g. absent to very weak)	-	1 (e.g. absent to weak)
3 (weak)	3 (weak)	3 (weak)	2 (intermediate)*
5 (medium)	5 (medium)	5 (medium)	3 (strong)
7 (strong)	7 (strong)	7 (strong)	
9 (very strong)	-	9 (very strong)	

* this state would always be described as intermediate

20. It was agreed that the Office, in conjunction with Mrs. Elise Buitendag (ZA) as coordinator of TGP/7 “Development of Test Guidelines,” should draft a proposal for describing apex and tip characteristics. This would be discussed at the next session under the development of TGP/7.

21. The Working Party clarified that the description of maturity for fruit varieties would depend on whether the variety was a climacteric, or non-climacteric fruit. In the case of non-climacteric fruit, it was agreed that a standard maturity characteristic would be “Time of beginning of fruit ripening” which would be defined as “The time of beginning of fruit ripening is considered to be the time of eating ripeness, when the fruit is most easily..... [e.g. picked from the tree/plucked]”. A standard wording option for climacteric fruit would be developed by Germany and New Zealand for discussion at the 2002 session.

22. Written comments on the remainder of the document were invited to be sent to the Office, by the end of November 2001.

TGP/8 “Use of Statistical Procedures in DUS Testing”: draft Section 4: Types of Characteristics and their Scale Levels

23. The experts were invited to submit written comments on document TWF/32/11, to the Office, by the end of November 2001.

TGP/9 “Examining Distinctness”: Section 3: Examining Distinctness in Different Types of Variety

24. The experts were invited to submit written comments on document TWF/32/12, to the Office, by the end of November 2001.

TGP/10 “Examining Uniformity”: Section 2: Assessing Uniformity According to the Features of Propagation

25. The experts were invited to submit written comments on document TWF/32/13, to the Office, by the end of November 2001.

Draft Test Guidelines to be Presented to the Technical Committee

26. It was agreed that draft Test Guidelines on the following crops would be submitted to the Technical Committee for approval in April 2002, on the basis of the amendments shown in Annex V.

TG/41/5(proj.)	European Plum (Revision)
TG/187/1(proj.)	Prunus Rootstocks.

27. The amended versions of these draft Test Guidelines should be received by the Office no later than December 1, 2001.

Draft Test Guidelines to be Presented to the Professional Organizations

28. It was agreed that the draft Test Guidelines on the following crops would be sent to the professional organizations, on the basis of the amendments presented in Annex VI.

TWF/32/2	Grapefruit and Pummelos (Revision)
TWF/32/3	Lemons and Limes (Revision)
TWF/32/4	Mandarins (Revision)
TWF/32/5	Oranges (Revision).

29. The amended versions of these draft Test Guidelines are to be received by the Office no later than December 1, 2001.

Draft Test Guidelines to be Discussed at the TWF in 2002

30. The Working Party agreed that the following draft Test Guidelines required further revision and discussion at the TWF in 2002:

TWF/32/6	Annona Cherimola*
TWF/32/15	Apricot (Revision)*
TG/97/3, TWF/31/8	Avocado (Revision)*

TWF/30/4	Fig
TWF/32/16	Persimmon (Revision)*
TWF/32/7	Prickly Pear (<i>Opuntia</i>)*
TWF/32/17	Quince (Revision)*
TWF/32/18	Raspberry (Revision)*
TWF/32/14	Trifoliata Oranges

* Revisions agreed at the session are set out in Annex VII.

31. The Working Party decided that the first drafts of Test Guidelines of the following crops would be produced for discussion at the TWF in 2002:

Apple (Revision)
Mango (Revision)
Passion Fruit
Pineapple

32. The leading experts and participating countries are set out in the table in Annex VIII.

33. It was agreed that all leading experts would send the revised or first drafts to the Office no later than two months before the session, to allow time to check the standard wording and formatting.

Future Program, Date and Place of Next Session

34. On the basis of a written invitation received by the Office from the Argentinean authorities, the thirty-third session of the TWF was planned to be held in San Carlos de Bariloche, Argentina, from November 25 to 29, 2002.

35. The provisional program was agreed as follows:

1. Opening of the session
2. Adoption of the agenda
3. Short reports on new developments in plant variety protection in fruit crops
4. Report on other Technical Working Parties and the Technical Committee and particularly regarding issues raised at the last session of the Working Party
5. Associated TGP documents to the General Introduction
6. Discussions on draft Test Guidelines
7. Future program, date and place of the next session
8. Adoption of the report of the conclusions of the session
9. Closing of the session.

Nomination of Chairman

36. The Working Party agreed to nominate Mr. Erik Schulte (DE), to the Technical Committee, for proposal as the next Chairman of the Working Party.

Visits

37. On October 1, 2001, the Working Party visited the IVIA Research Station, where it received a report on the activities at the Station by the IVIA Director, Mr. Florentino Juste, and his colleagues. The topics included the IVIA germplasm bank, new varieties, certification, variety collections and variety description and databases.

38. On October 3, 2001, the Working Party visited the A.V.A.S.A, Foundation Block of the Spanish Association of Citrus Nurseries, at Alcalà de Xivert (Castellón). They were welcomed by Mr. Ricart, President of A.V.A.S.A. and Mr. Llatser, General Manager. The presentation on the Spanish Citrus Industry and Certification Scheme was followed by a visit to the Foundation Block.

39. Later on the same day the Working Party visited Viveros Valencia, where the experts were given a guided tour of the mother tree and propagation blocks or budwoods.

40. This report has been adopted by correspondence.

[Annex I follows]

ANNEX I

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[Annex II follows]

ANNEX II

Proposed Amendments to TC/37/9(a)	<i>Explanation</i>
<p>1.The examination, or “DUS Test,” is based mainly on growing tests, carried out by the authority competent for granting plant breeders' rights or by separate institutions, such as public research institutes, acting on behalf of that authority or in some cases on the basis of growing tests carried out by, <u>or on behalf of,</u> the breeder¹.</p> <p>Footnote: In this document the term “breeder” means the breeder of a variety or the breeder’s successor in title.</p>	<p><i>It is also possible that the tests could be carried out by third parties on behalf of the breeder.</i></p>
<p>5.4 <u>Interpretation of Observations for the Assessment of Distinctness Without the Application of Statistical Methods</u></p> <p>72. In cases where there is very little variation within varieties, <u>the determination of assessments on</u> distinctness <u>is</u>are usually <u>made by on the basis of a</u> visual assessment, rather than by statistical methods.</p>	<p><i>Editorial</i></p>
<p>7.3.2 Hybrid Varieties</p> <p>113. <u>In addition to an examination of the hybrid variety itself,</u> the stability of a hybrid variety may <u>also</u>—be assessed <u>further</u> by examination of the uniformity and stability of its parent lines <u>in addition to the hybrid variety itself.</u></p>	<p><i>Editorial</i></p>

[Annex III follows]

ANNEX III

Ref.		Title
TG/00	Office	<u>List of TGP Documents and Latest Issue Dates</u> (Coordinator: Office of the Union)
TGP/1	Office	<u>General Introduction With Explanations</u> (Coordinator: Office of the Union)
TGP/2	Office	<u>List of Test Guidelines Adopted by UPOV</u> (Coordinator: Office of the Union)
TGP/3		VARIETIES OF COMMON KNOWLEDGE (Coordinator: Office of the Union)
3.1	Office (Draft: CAJ/43/2)	The Notion of Breeder
3.2	(Miss Scott, GB) TWA TWO TWF	Developments and Explanations Regarding Varieties of Common Knowledge Mrs. Rücker (DE) to draft paper, in consultation with Miss Scott and Mrs. Lean for consideration at the TWA, TWO and TWF in 2002. Miss Scott (GB) to participate in the development Mrs. Lean (GB) to participate in the development
TGP/4		MANAGEMENT OF VARIETY COLLECTIONS (Coordinator: Mr. Guiard, FR)
	TWA	COMMENT: May be necessary, in future, to merge with TGP/9 "Examining Distinctness"
4.1	TWA TWW TWO	General Guidance for the Management of Variety Collections Mr. Guiard, (FR) to produce draft for circulation to TWPs in 2002, based on TWA comments on TWA/30/17 (Relationship between varieties of common knowledge and [reference] variety collections) and discussions with Mr. Green and Mr. Barnaby. Mr. Green (UK) to participate in development Mr. Barnaby (NZ) to participate in development

Ref.		Title
4.2	TWO and TWF	<p>Guidance for variety collections which are planted at different times to candidate varieties (e.g. trees)</p> <p>Mr. Barnaby (NZ), with assistance from CPVO, to prepare draft paper. Mr. Barnaby to circulate draft paper to Mr. Guiard (FR) for comment, prior to submission to TWO and TWF in 2002.</p>
TGP/5		<p>EXPERIENCE AND COOPERATION IN DUS TESTING (Coordinator: Office of the Union)</p>
5.1	C/27/15, Annex III	<p>Model Administrative Agreement for International Cooperation in the Testing of Varieties</p>
5.2	<p>C/XVIII/9 Add. Annexes II and IV, Part I</p> <p>TWV</p> <p>TWA</p>	<p>UPOV Model Form for the Application for Plant Breeders' Rights</p> <p>The TWV proposed that the application form should contain a declaration from the breeder regarding freedom from factors which may affect the expression of characteristics (see TC/37/9(a): 2.5.3) and advising of any use of e.g. propagation methods which might also affect the expression of characteristics.</p> <p>1. Comment: The need to move the declaration regarding freedom from such factors, to the application form, will depend on the CAJ advice on the legal status of information supplied in the TQ.</p> <p>2. Comment: The TQ information on authorization for release (section 8) may also need to be moved to the application form depending on the status of the information provided in the TQ.</p>
5.3	<p>TC/26/6, Annex II, pages 1-3</p> <p>TWA</p>	<p>Technical Questionnaire to be Completed in Connection with an Application for Plant Breeders' Rights</p> <p>Comment: This may need to be modified according to advice from the CAJ on the status of the information provided in the TQ.</p>
5.4	TC/XXV/1 2 Annex, page 6	<p>UPOV Request for Examination Results</p>
5.5	TC/XXV/1 2 Annex, page 7	<p>UPOV Answer to the Request for Examination Results</p>
5.6	TC/XXV/1 2 Annex, page 1	<p>UPOV Report on Technical Examination</p>
5.7	TC/26/6, Annex I, pages 1-3	<p>UPOV Variety Description</p>

Ref.		Title
5.8	TC/XXV/1 2 Annex, page 5 T WV/TW A/TWO	UPOV Interim Report on Technical Examination Propose the drafting of guidelines for the use of, and arrangements for, interim reports.
5.9	C/(34)/5	Cooperation in Examination
5.10	TC/(36)/4	List of Species in Which Practical Technical Knowledge Has Been Acquired or For Which National Guidelines Have Been Established
5.11	Office (Draft: UK paper)	Notification of Additional Characteristics
TGP/6		ARRANGEMENTS FOR DUS TESTING <i>(Coordinator: Office of the Union)</i>
6.1	TWA TWO/TWF (UPOV)	Summary of Options for Arranging DUS Testing Mr. Hossain (AU) to produce revised draft of TC/36/7 6B, based on comments from TWA in 2000 and responses to TC/37/7 as reported by the Office of the Union. Propose UPOV prepare paper based on national approaches presented by France, Japan and Australia at the 2001 Asian Regional meeting.
6.2	C/27/15, Annex III	Model Administrative Agreement for International Cooperation in the Testing of Varieties
6.3	C/27/15, Annex II	Declaration on the Conditions for the Examination of a Variety Based on Trials Carried Out by or on Behalf of Breeders
6.4	Office	Information on the Level of Involvement of the Breeder in the Growing Test Office to produce report based on responses to TC/37/7 Rev.
TGP/7	(Draft: TC/37/10) TWF:	DEVELOPMENT OF TEST GUIDELINES <i>(Coordinator: Mrs. Buitendag (ZA)</i> UPOV Office to prepare a collection of characteristic descriptions used in recent Test Guidelines for review at TWF in 2002
TGP/8		USE OF STATISTICAL PROCEDURES IN DUS TESTING <i>(Coordinator: Office of the Union)</i> Office to prepare a collection of characteristic descriptions used in recent Test Guidelines for review at TWF in 2002
8.1	TWC TWO	Introduction (S. Grégoire (FR), L. Keizer (NL) to draft for TWC session in 2002) Miss Scott to participate in development
8.2	TWC	Validation of Data and Assumptions (K. Kristensen (DK), J. Thissen (NL) to draft for TWC session in 2002)

Ref.		Title
8.3	TWC	<p>Experimental Design Practices (to cover TGP/7)</p> <p>8.3.1 Selection of trial site</p> <p>8.3.2 Size and elements of the trial: plot size and shape, no. of replications, design etc...</p> <p>8.3.3 Sampling from the trial</p> <p>8.3.4 Type I and Type II errors</p> <p>(J. Thissen (NL), U. Meyer (DE) to draft by end July 2001)</p> <p>Office of the Union to circulate, to other TWPs, for comment during 2001.</p>
8.4	TWC	<p>Type of Characteristics and their Scale Levels</p> <p>8.4.1 Ratio scale data</p> <p>8.4.2 Interval scale data</p> <p>8.4.3 Ordinal scale data</p> <p>8.4.4 Nominal scale data</p> <p>8.4.5 Combined scale data</p> <p>(U. Meyer (DE) to draft by June 15, 2001)</p> <p>The Office to circulate the draft paper to the other Technical Working Parties. These will supply comments by the end of November 2001,</p>
8.5	TWC	<p>Statistical Methods for DUS Examination</p> <p>(S. Watson (GB), A. Roberts (GB) to prepare list of methods, including multivariate analysis, for TWC session in 2002)</p>
8.6	TWC	<p>Examining DUS in Bulk Samples</p> <p>(K. Kristensen (DK) to draft for TWC session in 2002)</p>
TGP/9		<p>EXAMINING DISTINCTNESS</p> <p>(Coordinator: Office of the Union)</p>
9.1	<p>TWV and TWF</p> <p>TWA</p> <p>TWO</p>	<p>General Procedures for Determining Distinctness</p> <p>Mr. Semon (CPVO) to draft paper for presentation to TWV and other TWP's in 2002.</p> <p>Mr. Guiard (Fr) and Mr. Hossain (AU) to draft revised paper based on TWA comments on TWA/30/9 Corr. and TWA/30/9 Add. 1, for "official" and "breeder" testing system respectively. To be discussed with Mr. Semon and Miss Scott prior to circulation to all TWP's in 2002.</p> <p>Miss Scott (GB) to participate in development of proposal</p>

Ref.		Title
9.2	TWA TWO	<p>Consideration of the Application of Statistical Methods (Make reference to TGP/8)</p> <p>TWA suggest to draft this section only after the development of TGP/8.1 and the completion of all other sections of TGP/9, in order to provide a comprehensive summary.</p> <p>Miss Scott (GB) to participate in development of proposal</p>
9.3	TWP TWA TWF TWO	<p>Consideration of All Varieties of Common Knowledge in the Examination of Distinctness: 9.2.1 Categorization of Varieties (Test Guidelines) 9.2.2 Pre-screening using variety descriptions (Descriptions from the same or different locations) 9.2.3 Organizing the growing trial (Grouping; Randomization)</p> <p>Mr. van Ettehoven (NL) to draft paper, in consultation with Mrs. Lean and Mr. Kwakkenbos, for presentation to TWV and other TWP's in 2002.</p> <p>1. Mr. Guiard (FR) to develop document on the basis of the GAIA system as explained in TWA/30/15. 2. TWA propose a link between this section and TGP/4 " Management of Variety Collections".</p> <p>Mrs. Lean (GB) to participate in development of proposal</p> <p>Mr. Kwakkenbos (CPVO) to participate in development of proposal</p>
9.4	TWC TWA TWO TWF	<p>Examining Distinctness in Different Types of Variety</p> <p>Mrs. Rücker (DE) to draft by end July 2001. The Office to circulate draft paper. The TWA, TWO and TWF will supply comments by the end of November 2001.</p> <p>TWA to participate in development by commenting on TWA/30/10 (Draft Section for TGP/9 Examining Distinctness).</p> <p>TWO to participate in development</p> <p>Mr. Schulte (DE) and Mrs. Lean (GB) to develop TWF to participate in development of section on Rootstocks</p>
9.5	TWA	<p>Use of the Parental Formula for Examining Distinctness in Hybrids</p> <p>Mr. Guiard (FR) to produce revised draft on basis of comments on TWA/30/13 (Use of Parental Formula for Examining Distinctness in hybrids) and, if considered appropriate, TWA/28/16 "DUS Testing of Oilseed Rape Varieties"</p>
9.6	TWC (TWC/ 17/10 and 18/2) TWF	<p>Use of Multiple Locations in the Examination of Distinctness (S. Grégoire (FR) to draft for TWC session in 2002)</p> <p>Mrs. Paraschiv (RO) to participate in development of document</p>

Ref.		Title
9.7	TWC (TC/33/7) (TWC/ 14/6)	Recommended Statistical Methods 9.6.1 COYD 9.6.2 LSD Annex Probability levels (S. Watson (GB), A. Roberts (GB) to draft for TWC session in 2002)
TGP/10		EXAMINING UNIFORMITY (Coordinator: Office of the Union)
10.1	UPOV Office TWO	Considering the Application of Statistical Methods (Make reference to TGP/8) TWO wish to participate in development
10.2	TWC	Assessing Uniformity according to the Features of Propagation (to include explanation of relative tolerance) 10.2.1 Uniformity using Off-Types 10.2.2 Uniformity assessment on the basis of Variances Mrs. Rücker (DE) to draft by end of July 2001 for circulation to TWA, TWO and TWF for comment in 2001. Comments to be sent to the Office by end of November 2001
10.3	TWC (TC/33/7) (TWC/ 14/6)	Recommended Statistical Methods 10.3.1 COYU Annex: Probability levels 10.3.2 Off-types absolute relative – method to be developed 10.3.3 Segregation ratios (10.3.1/2 S. Watson (GB), A. Roberts (GB) to draft for TWC session in 2002) (10.3.3 J. Law (GB) to draft for TWC session in 2002)
TGP/11		EXAMINING STABILITY
	TWV	CPVO to draft paper for presentation to TWV and other TWP's in 2002. (To include explanation of difference between "verification" and examination of stability)

Ref.		Title
TGP/12		SPECIAL CHARACTERISTICS <i>(Coordinator: Office of the Union)</i>
12.1	(Draft: TC/36/7 12D) TWW TWA TWA	Characteristics Expressed in Response to External Factors 12.1.1 Disease Resistance Mr. van Ettehoven (NL) to draft paper for presentation to TWV and other TWP's in 2002 12.1.2 Chemical Response (e.g. Herbicide tolerance) Mr. Hossain (AU) to draft paper for TWA in 2002 12.1.3 Insect Resistance Mr. Guiard (FR) to draft paper for TWA in 2002. (Mr. Hossain (AU) to contribute)
12.2	TWA	Chemical constituents 12.2.1 Protein Electrophoresis Mr. Camlin and Mr. Guiard to draft paper for TWA in 2002, with reference to TC/36/7 12E
12.3	(Draft: TC/36/7 12B)	Examination of combined characteristics using Image Analysis
12.4	TWW TWF	Examination of scent and flavor characteristics TWW to draft Mr. Bergamini (IT) to participate in the development of the document
TGP/13		GUIDANCE FOR NEW TYPES AND SPECIES <i>(Coordinator: Miss Scott, GB)</i>
13.1	TWA TWO TWF	General Guidance for New Species Mr. Camlin (GB) to produce paper for TWA, TWO and TWF in 2002, based on TC/36/7 13A&B, in consultation with Mr. Barnaby (NZ) CPVO to participate in development Mr. Barnaby (NZ) and Mr. Barrientos-Priego (MX) to participate in development of the document
13.2	TWA TWO TWF	Guidance for New Types of Variety Mr. Camlin (GB) to produce paper for TWA, TWO and TWF in 2002, based on TC/36/7 13A&B, in consultation with Mr. Barnaby (NZ) CPVO to participate in development Mr. Barnaby (NZ) and Mr. Barrientos-Priego (MX) to participate in development of the document

Ref.		Title
13.3	TWF	Guidance for New Multi- and Inter-specific Hybrids Mr. Barnaby (NZ), Mr. Barrientos-Priego (MX) and Mr. Semon (CPVO) to draft paper for TWF meeting in 2002
TGP/14		GLOSSARY OF TECHNICAL, BOTANICAL AND STATISTICAL TERMS USED IN UPOV DOCUMENTS <i>(Coordinators: Office of the Union, Miss Scott (GB) + Mrs. Buitendag (ZA), Mr. Law (GB) + Mr. Pilarczyk (PL) + Mr. Harsanyi (HU))</i>
14.1	UPOV Office (Draft: TC/36/7 18A)	Technical Terms
14.2	??? (Draft: TC/36/5) TWF	Botanical Terms Mrs. Buitendag (ZA) to develop paper on plant shapes in consultation with Mrs. Lean (GB), Mr. Barnaby (NZ) and Mr. Bergamini (IT)
14.3	Mr. Hossain, (AU) (Draft: TWA/29/9)	Statistical Terms
TGP/15		NEW TYPES OF CHARACTERISTICS <i>(Coordinator: Office of the Union)</i>
15.1	TC, BMT, all TWP's	Molecular characteristics

[Annex IV follows]

ANNEX IV

General

The TWF proposed that section 3 “Conduct of Tests” and section 4 “Methods and Observations” should be combined into a new single chapter “Method of Examination”. In addition, it proposed that any advice regarding the observation of characteristics (e.g. timing or part of the plant to be observed) should be contained in section 8 “Explanations”.

Proposed Amendments to TC/37/10 Annex 1	<i>Explanation</i>
<p>2. MATERIAL REQUIRED</p> <p>2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicant¹Breeders submitting material from a State other than that in which the testing takes place must ensure that all customs formalities <u>and phytosanitary requirements</u> are complied with.</p> <p>¹ <u>Footnote as included in General Introduction.</u></p>	
<p>2.3 The minimum quantity of plant material to be supplied by the applicant^{breeder} in one or several samples should be:</p> <p style="text-align: center;"><u>[xxxxx]</u></p> <p style="text-align: center;"><u>based on the standard UPOV formula specified in TGP/7 “Development of Test Guidelines”</u></p> <p>Formula to be moved to TGP/7.</p>	
<p>2.5 The plant material should not have undergone any treatment, <u>which would influence the expression of the characteristics of the variety</u>, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.</p>	
<p>3.3 The tests should be carried out under conditions ensuring satisfactory growth for the conduct of the examination. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing cycle. Each test should include a total of [see TGP/7 3.3] plants which should be divided between [see TGP/7 3.3] replicates (remove to optional standard wording)</p>	
<p>4.1 <u>Number of Plants / Parts of Plants to be Examined by Measuring, Weighing or Counting</u></p> <p>4.1.1 Unless otherwise indicated, all observations determined by measuring, weighing or counting should be made on [see TGP/7 4.1] plants or [see TGP/7 4.1] parts taken from each of [see TGP/7 4.1] plants.</p>	

<p>4.1.2 <i>Unrelated and Very Atypical Plants</i></p> <p>The test material may contain plants that are very atypical or unrelated to those of the variety. These are not necessarily treated as off-types, or part of the variety, and may be disregarded, and the test may be continued, as long as the removal of these very atypical or unrelated plants does not result in an insufficient number of suitable plants for the examination, or make the examination impractical. In choosing the term “may be disregarded” UPOV makes it clear that it will depend on the judgment of the crop expert. In practice, in tests conducted with a small number of plants, just one single plant could interfere with the test, and therefore should not be disregarded. [from TG/1/3: currently TC/37/9 paragraph 108]</p> <p><u>(Comment: Keep this in Methods and Observations section and keep ALL current wording)</u></p>	<p><i>The decision on whether to continue with the examination may be taken at the outset and not left until the judgement of uniformity.</i></p>
<p>4.2 <u>Distinctness</u></p> <p>It is of particular importance for users of these Test Guidelines to consult [TG/1/3 ref – currently Chapter 5 of TC/37/9] <u>and TGP/9 “Examining Distinctness”</u>, prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.</p>	
<p>4.2.1 <i>Consistency</i></p> <p>It is generally recommended that the growing trials are conducted over <u>at least</u> [x] growing cycle(s) to ensure that any differences in a characteristic are sufficiently consistent. (move to optional wording to allow suitable wording for single growing cycle, without mention of “to ensure that any differences are sufficiently consistent”)</p>	

4.2.2 *Clear Differences*

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner [quote from TC/37/9 5.3.3.2]. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations provided by [TG/1/3 ref – currently Chapter 5 of TC/37/9] and TGP/9 “Examining Distinctness”, prior to making decisions regarding distinctness

4.2.2.1 ~~Type of Expression of the Characteristic [from TG/1/3: currently TC/37/9: Chapter 5.3.3.2]:~~

~~Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner:~~

Qualitative Characteristics

~~In qualitative characteristics the difference between two varieties may be considered clear if the characteristics show expressions that fall into two different states in the Test Guidelines. Varieties should not be considered distinct for a qualitative characteristic if they have the same state of expression. [from TG/1/3: currently TC/37/9 paragraph 68]~~

Quantitative Characteristics

~~Quantitative characteristics are considered for distinctness according to the method of observation and the features of propagation of the variety concerned. The different approaches are considered in TG/1/3. [from TG/1/3: currently TC/37/9 paragraph 69]~~

Pseudo-Qualitative Characteristics

~~A different state in the Test Guidelines may not be sufficient to establish distinctness (see also TG/1/3 – currently TC/37/9: Chapter 5.5.2.3). However, in certain circumstances, varieties described by the same state of expression may be clearly distinguishable. [from TG/1/3: currently TC/37/9 paragraph 70]~~

~~[see TGP/7 4.2.2.1]~~

<p>4.3 <u>Uniformity</u></p> <p>It is of particular importance for users of these Test Guidelines to consult [TG/1/3 ref – currently Chapter 6 of TC/37/9] <u>and TGP/10 “Examining Uniformity”</u>, prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:</p>	
<p>4.4 <u>Stability</u></p> <p><u>In practice, it</u> is not usually possible to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, in general, when <u>a variety a submitted sample</u> has been shown to be uniform <u>the material</u> it can also be considered <u>to be</u> stable. [from TG/1/3:–currently TC/37/9 paragraph 111]</p>	<i>Update</i>
<p>[4.5 <u>Timing of Observation of Clustered Characteristics – if applicable</u>] [4.6 <u>Observation of Color - if applicable</u>] <u>Move to Explanations chapter</u></p>	

<p>5. <u>GROUPING OF VARIETIES IN AND ORGANIZATION OF THE GROWING TRIAL</u></p> <p>5.2— Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used to select, either individually or in combination with other such characteristics, varieties of common knowledge that should be included in the growing trial for examination of distinctness. In addition, they are characteristics in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics, to organize the growing trial so that similar varieties are grouped together. [from TG/1/3: currently TC/37/9 chapter 4.8]</p> <p><u>5.2(a) The following qualitative characteristics can be used to create distinct groups of varieties, with each different state of expression defining a separate group:</u></p> <p><u>Any variety in one group may be considered to be distinct from any variety in another group.</u></p> <p><u>[list qualitative chars]</u></p> <p><u>5.2(b) Non qualitative characteristics cannot, in general, be used to define distinct groups of varieties in a simple way because there is continuous variation in the range of expression of these characteristics. However, these characteristics can still be used to identify similar varieties, which can then be grown close together in a growing trial, and also to establish distinctness from certain other varieties, which may then not need to be compared in a growing trial. The following characteristics have been agreed to be particularly useful for this purpose because they provide good discriminating power between the existing varieties of common knowledge.</u></p> <p>5.3— The following characteristics have been agreed as useful selected as grouping characteristics:</p> <p>5.4— Grouping characteristics and characteristics included in the Technical Questionnaire are those considered to be particularly useful when arranging for similar varieties to be placed together in the trial.</p>	
<p>6.1 <u>Categories of Characteristics Included in the Table of Characteristics</u></p> <p>6.1.1 Standard <i>Test Guidelines Characteristics</i></p>	
<p>6.1.2 <i>Asterisked Characteristics</i></p> <p>Asterisked characteristics (denoted by *) are those <u>included in the Test Guidelines</u>, which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all Contracting Parties except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate. [from TG/1/3: currently TC/37/9 chapter 4.8] [see TGP/7 6.1.2]</p>	

<p>6.3 <u>Types of Expression</u></p> <p>An explanation of the types of expression of characteristics (Qualitative, Quantitative and Pseudo-Quantitative) is provided in TG/1/3 [ref] [currently chapter 4.4 of TC/37/9]</p>	
<p>6.4 <u>Example Varieties</u></p> <p>Example varieties are provided where it is not possible, or practical, to illustrate <u>all</u> the states of expression (in Chapter 8) in a way which applies to all environments in which the DUS examination may be conducted. <u>Example varieties are not necessary for qualitative [or pseudo-qualitative – to be considered] characteristics.</u></p> <p>Ideally a single set of example varieties would be appropriate for all countries conducting DUS examination, however, there are two situations where this is not possible:</p> <ol style="list-style-type: none">1.—The states of expression are universal for all environments i.e. the example varieties are a universal illustration of the states of expression but may not be available in the country in which the DUS examination is being conducted. In such cases these Test Guidelines may identify alternative sets of example varieties which seek to provide sufficient coverage, or which can be used as standards from which to calibrate local or more recently developed varieties.2.—The environmental influence on the characteristics is such that the states of expression for an example variety are only applicable for certain regions. In this case, separate sets of example varieties, with different ranges of expression, may be provided to illustrate the states of expression in specified environments. <p>The example varieties provided in these Test Guidelines were developed in....:[xxxx] (remove all to optional standard wording)</p>	

<p>6.5 <u>Legend:</u></p> <p>(*) Asterisked characteristic – see 6.1.2</p> <p>(G) Grouping characteristic – see 5.1</p> <p>(QL) Qualitative characteristic – see 6.3 (QN) Quantitative characteristic – see 6.3 (PQ) Pseudo-Qualitative characteristic – see 6.3</p> <p>(A) Observe characteristic on: spaced plants (B) row plots (C) special test</p> <p>[see TGP/7 6.5]</p> <p>(MS) Measurement of a number of individual plants or parts of plants (MG) Measurement of a group of plants or parts of plants (VS) Visual assessment of a number of individual plants or parts of plants (VG) Visual assessment of a group of plants or parts of plants (^{Footnote}) Footnote explaining reason why method of observation not provided</p>	
<p>(+) See Explanations on the Table of Characteristics in Chapter 8.</p>	<p><i>Notes for drafters should encourage use of illustrations / photographs of all characteristics where possible.</i></p>
<p>9. LITERATURE</p>	<p><i>Template / guidance needed for drafters</i></p>
<p style="text-align: center;">TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	<p><i>Pages to contain breeder's reference, document reference and page numbering</i></p>
<p>1. Subject of the Technical Questionnaire</p> <p>1.1 Latin Name [see TGP/7 1.1] 1.2 Common Name [see TGP/7 1.1]</p>	<p><i>Include options which require the species / genera to be specified.</i></p>
<p>2. Applicant</p> <p>Name Address Tel. No. Fax No. E-mail address</p>	<p><i>Duplicate information requested in application form and provide more space for this box</i></p>

<p>3. Proposed denomination and/or breeder's reference</p> <p>(a) Breeder's reference (b) Proposed variety denomination</p>	<p><i>Less space needed for this box.</i></p>
<p>4.1 Origin</p> <p>(a) Product of cross between different varieties undertaken by the applicant []</p> <p>(b) Selection of mutant or variant plant from a variety of common knowledge [] —— (please provide details):</p> <p>(c) Discovery _____</p> <p>(d) Other _____ —— (please provide details):</p> <p><u>STANDARD OPTION:</u></p> <p><u>1. Seedling resulting from:</u> (a) <u>controlled cross</u> (b) <u>partially unknown cross</u> (c) <u>totally unknown cross</u> <u>(please state parent varieties)</u></p> <p><u>2. Mutation</u> <u>(please state parent variety)</u></p> <p><u>3. Discovery</u> <u>(please indicate where and when, and how developed)</u></p> <p><u>4. Other</u> <u>(please provide details)</u></p>	<p><i>CAJ advice to be sought on question regarding discovery. The information requested here is restricted to that which would affect the examination of the variety.</i></p>

<p>4.2 Method of Propagation <u>of the variety</u>:</p> <p>(a) Seed:</p> <p style="padding-left: 20px;">(i) Self-pollinated</p> <p style="padding-left: 20px;">(ii) Cross-pollinated controlled population synthetic variety</p> <p style="padding-left: 20px;">(iii) Hybrid [see TGP/7 TQ 4]</p> <p>(b) Vegetative Propagation:</p> <p style="padding-left: 20px;">(i) Tuber/...../</p> <p style="padding-left: 20px;">(ii) Cuttings</p> <p style="padding-left: 20px;">(iii) In vitro propagation</p> <p style="padding-left: 20px;">(iv) other (please specify)</p> <p>.....</p>	<p><i>Information regarding “in vitro” does not concern the propagation of the VARIETY, just the material to be examined.</i></p>
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6. Characteristics.....

Denomination (s) of variety(ies) <u>similar</u> to your variety	Characteristic(s) in which your variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the <u>similar</u> variety(ies)	Describe the expression of the characteristic(s) for your variety
Example: name of variety	Plant: height	short	tall

5. The TWO considers the wording of the proposal more easily understood as, apart from the experts involved in the drafting and familiar with the UPOV terminology, few would understand the term “state of expression.” The TWO also proposed to delete the footnote as it would not be at all understood by the applicant and would apply only in very rare cases. Even in those cases the applicant would not know the exact states of expression of the Test Guidelines as he would not always have a copy of those Test Guidelines at hand and he would not really give the same expression in both columns.

<p>7.1 <u>In addition to the information provided in section 5 and 6, are there any</u> additional characteristics which may help to distinguish the variety?</p> <p style="text-align: center; color: red;">YES [] NO []</p> <p style="color: red;"><u>7.1.12</u> If yes please give details:</p>	
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<p>9. Declaration of suitability of material for DUS examination</p> <p>—— To the best of my knowledge the material submitted for examination is free from any factors that may affect the expression of the characteristics of the variety, within the terms of chapter 2.5.3 of TG/1/3 “Revised General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants”.</p> <p>—— YES ————— [..]</p> <p>—— NO ————— [..] (please provide details)</p>	<p><i>See separate annex on material to be examined</i></p>
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“NEW ANNEX”: INFORMATION ON MATERIAL TO BE EXAMINED

<p><u>1. To the best of your knowledge, is the material to be examined free from any factors that may affect the expression of the characteristics of the variety?:</u></p> <p><u>YES</u> _____ [...]</p> <p><u>NO</u> _____ [...] (Please provide details)</p>	
<p><u>2. Health Status of the Material to be Examined:</u></p> <p><u>Has the material to be examined been tested for the presence of virus diseases?:</u></p> <p><u>NO</u> _____ [...]</p> <p><u>YES</u> _____ [...] (Please provide details of the viruses for which the material has been tested and the results)</p>	
<p><u>3. Vegetatively Propagated Varieties Only:</u></p> <p><u>Has the material to be examined been produced using “in vitro” propagation?:</u></p> <p><u>YES</u> _____ [...]</p> <p><u>NO</u> _____ [...]</p>	

[Annex V follows]

Test Guidelines for European Plum (Revision)

The Working Party reviewed document TG/41/5(proj.) and comments from the subgroup with Mr. Schulte (DE) as a leading expert and made the following main changes to it:

- (i) Grouping of Varieties, paragraph 2, to have the former characteristic 44 “Fruit: shape in lateral view” added as a grouping characteristic.
- (ii) Table of Characteristics

Characteristics

- 1 Germany to add explanations to section VIII. Explanations on the Table of Characteristics
- 2 To have the state “sparse (3)” instead of “open”
- 4 To have example variety “Precoce de Tour” added for the state “thin (3)”
- 6 To read: “One-year-old shoot: pubescence (upper third)”
- 12 To have the states as “absent (1), present (9)”
- 13 To read: “Young shoot: anthocyanin coloration of growing tip (during rapid growth)”
- 14 To be placed after characteristic 16, Germany to add explanations to section VII: Explanations on the Table of Characteristics
- 26 To have the states as “weak (3), medium (5), strong (7)”
- 28 To read: “Leaf: presence of nectaries”
- 29 To read: “Leaf: position of nectaries”, to have the state (3) as “equally on base of blade and petiole”
- 31 To be deleted
- 33 To read the state (1) as “very short”, to have example varieties for state (1) “Elena” and “Čačanska najbolja” deleted, to have a new characteristic “Pedicel: pubescence” with the states as “absent (1), present (9)” with example varieties and to be placed after characteristic 33, to have example varieties “Elena” and “Čačanska najbolja” for the state “absent (1)” and Frühzwetsche” for the state “present (9)”
- 34 To have the following order of states: “adpressed to petals (1), touching neither petals nor receptacle (2), touching receptacle (3)”, Germany to provide a diagram
- 36 To read: “Flower: arrangement of petals”

- 43 To have example variety “Reine Claude verte” for the state “medium (5)” deleted, to have example variety “Čačanska najbolja” for the state “very large (9)” to be replaced by “Giant”
- 44 To have the following order of states: “oblong (1), elliptic (2), circular (3), oblate (4), ovate (5), obovate (6)”, example variety “d’Ente” for the state “circular” deleted, to have example variety “Grand Prize” to be added for the state “oblong (1)” and example variety “Fortune” for the state “circular (3)”
- 47 To have the following order of states: “absent or weak (1), intermediate (2), strong (3)”
- 50 Italy to send the proposals for Germany concerning colors within next two weeks for the final evaluation, to have example varieties “Graf Brühl” and “Gräfin Cosel” for the state “violet blue” replaced by “Valor”
- 54 To have example variety “Hanita” for the state “non-adherent (1)” replaced by “Hauszwetsche”
- 57 To be deleted
- 58 To read: “Stone: development of keel”, to have example variety “Drap d’Or d’Espéren” for the state “weak (1)” to be replaced by “d’Ente” and “Stanley”
- 60 To read: “Stone: width at base”
- 63 To read: “Time of beginning of fruit ripening”, to have explanations added to the section VIII. Explanations on the Table of Characteristics

(iii) Explanations on the Table of Characteristics, to check in general if all diagrams correspond with changes made. To have Ad. 1: Tree: vigor added with the wording: “The vigor of the tree should be considered as the overall abundance of vegetative growth”. To have Ad. 63: “Time of beginning of fruit ripening” added with the wording: “The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed”. Synonyms of the example varieties: to read: “Quetsche d’Italie” instead of “Quetsche d’italie”, Germany to check for Italian denomination for “Italienische Zwetsche”, to have “(Prune d’) Abricot (vert)” deleted

(iv) Literature, Italy and Germany to supply additional references

(v) Technical Questionnaire, 4.4 Virus status to read: “The plant material is virus tested

yes []
no []

If the answer to that question is yes, please indicate against which viruses
.....”

Test Guidelines for Prunus Rootstocks

The Working Party reviewed document TG/187/1(proj.) and comments from the subgroup with Mr. Schulte (DE) as a leading expert and made the following main changes to it:

(i) Table of Characteristics

Characteristics

- 1 To read example variety “M x M 14” as “Brooks-60” throughout the document, to have example variety “Colt” deleted, Germany to add explanations to the section VIII. Explanations on the Table of Characteristics
- 2 To be placed after characteristic 12
- 3 To have the notes as “1, 2, 3”
- 4 To read example variety “M x M 60” as “Brooks-60” throughout the document, Germany to add explanations to the section VIII. Explanations on the Table of Characteristics
- 6 To read: “One-year-old shoot: pubescence (upper third)”, to have the states as “absent (1), present (9)” with example varieties as “Pixy” (1) and “SL 64” (9)
- 10 To have example variety for the state “small” (3) as “SL 64” instead of “Gisela 5”
- 12 To have a new characteristic: “One-year-old shoot: branching” with the states as “weak (3), medium (5), strong (7)” and to be placed after characteristic 12, Germany to provide example varieties
- 13 To read: “Young shoot: anthocyanin coloration of young leaf (during rapid growth)”, to have the state (9) “very strong” deleted
- 14 To have example variety “F 12/1” to be replaced by “GF 677”, to have example varieties for the state “circular (3)” as “Adara” and “SL 64”, to be placed after characteristic 17
- 15 To have example variety “Colt” for the state “very long (9)” to be replaced by “GF 677”
- 16 To have example varieties “Myrobalan B” and “SL 64” for the state “very narrow (1)” to be replaced by “Amandier x Peche GF 677”, to have example variety “Piku 1” for the state “narrow (3)” to be replaced by “Myrobalan B”
- 17 To have example variety “Weiroot 158” for the state “very large (9)” to be replaced by “GF 677”
- 18 To have example variety “SL 64” for the state “acute (1)” to be replaced by “GF 677”
- 20 To have example variety “SL 64” to be added for the state “rounded (3)”

- 23 To read: “Leaf blade: pubescence of lower side at apex”
- 24 To have the states as “only crenate (1), only serrate (2), both crenate and serrate (3)”, Spain to provide an example variety for the state “both crenate and serrate (3)”
- 26 To have example variety “Colt” for the state “medium (5)” deleted and to have example variety “GF 677” to be added for the state “long (7)”
- 27 To read: “Petiole: presence of pubescence of upper side”
- 28 To read: “Petiole: intensity of pubescence of upper side”
- 30 To have example variety “GF 677” to be added for the state “large (7)”
- 31 To have example variety “St. Julian A” to be added for the state “present (9)”
- 33 To have example varieties “St. Julian A” and “GF 677” to be added for the state “present (9)”
- 34 To read: “Varieties with nectaries only: Leaf: predominant number of nectaries”
- 35 To read: “Leaf: position of nectaries”, to have the states as “predominantly on base of blade (1), predominantly on petiole (2), equally on base of blade and petiole”
- 36 To have example variety “Pixy” for the state “red (3)” deleted
- 38 To read: “Plant: flowers”

(ii) Explanations on the Table of Characteristics, Ad. 14: Leaf blade: shape, Germany to improve diagram for the state “elliptic (2)”, Ad. 24: Leaf blade: incisions of margin, Germany to add a diagram for the state “both crenate and serrate (3)”, Explanations on the reference varieties, Germany to improve the table and to add the missing information.

(iii) Technical Questionnaire, 4.4 Virus status to read: “The plant material is virus tested

yes []
no []

If the answer to that question is yes, please indicate against which viruses
.....”

7.2 Utilization of rootstock for, to have botanical names instead of common names and to have one more option added: “other (specify)”.

[Annex VI follows]

ANNEX VI

All Test Guidelines for Citrus (Revision) (Grapefruit and Pummelos, Lemons and Limes, Mandarins, Oranges, Trifoliata Oranges)

The Working Party reviewed documents TG/83/3, TWF/27/14, TWF/30/2, TWF/31/3, TWF/32/2, TWF/32/3, TWF/32/4, TWF/32/5, TWF/32/14 and comments from the subgroup with Mrs. Buitendag (ZA) and Mr. Chomé Fuster (ES) as leading experts, and made the following main changes in documents TWF/32/2 (Grapefruit and Pummelos), TWF/32/3 (Lemons and Limes), TWF/32/4 (Mandarins), TWF/32/5 (Oranges), TWF/32/14 (Trifoliata Oranges):

AMENDMENTS TO ALL CITRUS TEST GUIDELINES

General: All agreed standard wording to be introduced.

Title Page: Test Guidelines to cover the relevant species and certain of their hybrids.

New section in all Citrus Test Guidelines:

Introduction to Citrus Test Guidelines:

The following Test Guidelines have been developed from the standard Citrus Test Guidelines template. In particular, the Table of Characteristics has been selected from the overall set of citrus characteristics presented in Annex I.

[Annex I will look like:

	English	français	deutsch	español	Group 1	Group 2
1.	Tree: growth habit				1. (*F) Upright (1), Spreading (2) Drooping (3)	N/A		
2.	Young leaf: presence of anthocyanin				2. Absent (1) Present (2)	1. (*R) Abs. – v. weak (1) Weak (3) Med (5) Strong (7)		

Annex 1 would also have the list of groups of Citrus varieties (see page 33, TWF/32/2)

I. Subject of these Guidelines

1. These Test Guidelines apply to all* ~~vegetatively propagated~~ varieties ~~for fruit production and rootstock varieties~~ of the following group of the genus *Citrus* L.:

Grapefruit and Pummelos and certain of their hybrids (see below)

GRA: *Citrus paradisi* Macfad. (Grapefruit)

PUM: *Citrus grandis* (L.) Osbeck (Pummelos)

(* Note: it will be necessary to specify where procedures (e.g. material to be supplied) relate specifically to, for example, vegetatively propagated varieties)

In the case of hybrids between species within the genus Citrus L., the Test Guidelines to be used should be those for which the overall appearance of FRUIT is most suited. However, if the variety cannot be clearly distinguished from ALL varieties covered by another set of Test Guidelines this other set of Test Guidelines should also be used to examine the variety.

In the case of hybrids between species within the genus Citrus L., where the variety is clearly distinguishable from all other varieties covered by other Test Guidelines, it may still be necessary to use additional citrus characteristics to examine the variety. In these circumstances it is appropriate to use characteristics from the Test Guidelines covering the parent species, or to select characteristics from the overall set of citrus characteristics presented in Annex I.

III. Conduct of Tests

3. The tests should be carried out under conditions ensuring normal growth. As a minimum, each test should include a total of 5 trees. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions. Where necessary for the examination of fruit varieties, a standard specified rootstock should be used for each group. (Comment: use standard wording for second half of sentence e.g. from apple Test guideline)

IV. Methods and Observations

10. Unless otherwise indicated, for the all observations on the fruit, 10 typical fruits should be made on the selected out from the spring or main fruiting blooming of the year of a minimum of 20 fruits from 5 trees.—All observations on the fruit should be made at the stage of optimum ripeness. This stage should be determined by the ratio total soluble solids/acid content of juice. The fruit should be tested weekly and harvested as soon as this stage has been reached.

12. All observations on the fruit surface and on the ~~texture and thickness of the~~ fruit rind should be made at the middle, between the base and apex of the fruit.

VI. Characteristics and Symbols

4. Legend:

(*F/R) Characteristics that should be used on all fruit / rootstock varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible. The asterisk (*) is applicable to fruit varieties only and not to rootstock varieties.

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

Standard citrus characteristic number to be provided in brackets after the individual characteristic number

Spain and Japan were invited to provide example varieties.
All second names of example varieties to be in capital letters.

The following amendments refer to the characteristic number in TWF/32/2, unless otherwise stated, but the corresponding characteristic should be changed in all Test guidelines.

Chars 2,9,10,11,13,15,46,52,53,100 etc...:

~~absent or very weakly expressed (1), weakly expressed (2), strongly expressed (3)~~
change to: e.g.

absent or very weak (1); weak (2); medium (3); strong (4)

New char: Ploidy: (Diploid, Triploid, Tetraploid)

Char 5: (TWF/32/3) young leaf: intensity of anthocyanin coloration ~~of tip~~

Char 14: DELETE

Char 16: entire (1); crenate (2); dentate (3).

Char 18: absent (1); present (2)

Char 30: (+) to be added
* to be removed

Char 39: Fruit: presence of depression at stalk end (excluding necked varieties)

Char 40: Fruit: depth of depression at stalk end (excluding necked varieties)

Char 59: absent (1); incomplete (2); complete (3)

Char 61: DELETE

Char 62: DELETE

Char 72: (+) to be added

New

(after 72): Lemon and Limes; Oranges only:

Fruit: variegation; absent (1); present (2)

Char 77: Fruit surface: ~~evenness of~~ size of glands

New

(after 97): Fruit: bitterness of flesh: absent (1); present (2)

Char 109: small ~~short~~(3); medium (5); large ~~long~~(7)

Char 114: * to be removed

Fruit: number of seeds (controlled self pollination)

New

(after 114): Fruit: number of seeds (open pollination): absent or very few(1); few (2); moderate (3); many (4)

(+) to be added

Char 118: Seed surface (~~when fresh~~): smooth (1); ~~veined (2)~~; wrinkled (3)

Char 119: Seed: prominence of ~~veins and/or~~ wrinkles

Char 121: light brown (3); medium brown (4); dark brown (5)

Char 123: DELETE

Char 126: ~~Plant~~ Fruit: parthenocarpy

Char 127: (+) to be added

The following characteristics from *Poncirus* are to be added to the overall citrus Test Guidelines (Annex), subject to further amendment of the wording:

Char 3a; 5a; 5b; 6a; 7a; 8a; 8b; 9a; 28a; 31a; 37a

Ad 18: Illustration to be taken from TWF/32/3

Ad 30: Ability to germinate by “in vitro” culture

Ad. 72: Predominant color on exposed surface of the fruit

Ad new (after 114): use wording from kiwi fruit Test Guidelines

Ad 127: Ability to self-fertilize under controlled self pollination

X. Technical Questionnaire

Note: TQ to be updated with revised characteristics

1. GROUP

GRAPEFRUIT AND PUMMELOS AND CERTAIN OF THEIR HYBRIDS

GRA: *Citrus paradisi* Macfad. (Grapefruit) []

PUM: *Citrus grandis* (L.) Osbeck (Pummelos) []

HYBRID []

(Please specify)

Amendments to TWF/32/2 (Grapefruit and Pummelos)

VI. Characteristics and Symbols

5. Abbreviations:

GRA: *Citrus paradisi* Macfad. - Grapefruit

PUM: *Citrus grandis* (L.) Osbeck – Pummelos

Hybrids to be added

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

Example variety “Tahiti” to be deleted throughout

Char 72: light pink ~~blush~~(5); medium pink ~~blush~~(6); dark pink ~~blush~~ (7)

Char 122: Delete

Amendments to TWF/32/3 (Lemons and Limes)

IV. Methods and Observations

~~13. The observation on the oiliness of the fruit rind should be made, by peeling the fruit, within 3 to 7 days after harvesting. (To delete for this group?)~~

15. ~~Unless otherwise stated,~~ all observations on the seed should be made on the fresh seed.

VI. Characteristics and Symbols

5. Abbreviations:

LEM: *Citrus limon* (L.) Burm. f. (Lemons)

LAL: *Citrus latifolia* Tan. (Acid Limes, ~~Lime-Bearss~~)

SWL: *Citrus limettioides* Tan. (Sweet Limes)

SAL: *Citrus aurantifolia* (Christm. ex Panz.) Swingle (Mexican Limes)

RLM: *Citrus jambhiri* Lush. (Rough Lemons)

HLL: HYBRIDS ~~LIKE LEMON OR LIMES,~~ which, overall, have the fruit characteristics of lemons and limes.

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

Replace example variety “Bearss” with “Tahiti”.

Char 40: replace example varieties

Char 53: wording as TWF/32/2

Char 72: Fruit surface: predominant color: green (1); yellow green (2); light yellow (3); medium yellow (4); yellow orange (5) variegated

Char 97: light green (13); light yellow (25); pink (37)

Ad. 48: to be added

X. Technical Questionnaire

7.3 Other information

A representative color photo of the variety should be included in the Technical Questionnaire, as indicated in attached scheme.

Amendments to TWF/32/4 (Mandarins)

Title: Mandarin x Grapefruit or pummelos (Tangelos)

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

Char 72: Green(1); yellow green(2); light yellow(3); medium yellow(4); ~~green and yellow;~~
yellow orange(5); medium orange(6); dark orange(7); orange red(8); red(9) ~~green~~
~~and orange; yellow and orange; yellow and red; orange and red~~

Char 97: delete ~~yellow and red~~ and renumber

Amendments to TWF/32/5 (Oranges)

IV. Methods and Observations

Delete paragraph 13.

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

Char 72: yellow orange(1); medium orange(2); dark orange(3); orange red(4); red(5)
Delete other states

Char 97: delete ~~yellow and red~~ and renumber

[Annex VII follows]

Test Guidelines for Annona Cherimola

The Working Party reviewed document TWF/32/6 and comments from the subgroup, with Mr. Barrientos-Priego (MX) and Mr. Atsuta (JP) as the leading experts, concentrating mainly on the Table of Characteristics, and made the following main changes in document TWF/32/6:

(i) Subject of these Guidelines

To read: “These Test Guidelines apply to all fruit varieties of *Annona cherimola* Mill. and their hybrids.

(ii) Methods and Observations

Paragraph 4 to read: “Unless otherwise stated all observations on the flower should be made at the time of flowering, when the petals are starting to separate.

(iii) Table of Characteristics

Characteristics

1 Delete and possibly replace with “Tree: length of internode”

New (after 1)

Tree: habit

2 To have a (+) with the explanation that this should be recorded on one-year old shoots

3 To have the states “elliptic (1), broad elliptic (2), circular (3), narrow lanceolate (4), lanceolate (5), ovate (6), oblanceolate (7), obovate (8), oblong (9)”

4 To read: “Leaf blade: length” with the states “short (3), medium (5), long (7)”

5 To check if this applies to the upper, lower or both sides of the leaf blade

9 To read: “Outer petal: length”. To have a (+) added.

10 To read: “Outer petal: width”

11 To read: “Outer petal: length / width ratio”

12 To read: “Outer petal: thickness”. To have a (+) added with the explanation that the observation should be made in the middle of the length.

New (after 12)

To read: “Outer petal: color” with the states “green brown (1), green yellow (2), light brown (3)” for the outer side or “white (1), cream (2), light yellow (3)” for the inner side.

13 To check if the correct term is “peduncle” or “pedicel”

14 To read: “Petal: twisting” and check if the twisting is the same just before anthesis. If not a new characteristic is to be created.

15 To read: “Petal: curving”

New (after 15)

To read: “Floral cone: color”. To check if “floral” or “ranunculus” is the correct term. States to be investigated

17 To read: “Fruit: shape in lateral view”. Drawings to be improved and, in particular, to show shapes with the same length.

18 To consider if this should be deleted

19 To read: “Color of skin”

New (after 19)

To read: “Fruit: glossiness of skin”

20 To read: “Fruit: thickness of rind”. Experts to provide information on the methods used.

21. To read: “Fruit: sectional pattern of surface” with the states “reticulate (1), scaly (2)”

22. To read: “Fruit sections: types of protuberances”. To be described and illustrated. Expert from Spain to provide classification reference.

30 To check if this characteristic is valid

32 To read: “Seed: length”

New (after 32)

To read: “Seed: width”

New (after 32)

To read: “Seed: number”

New (after 32)

To read: “Flesh to seed ratio (by weight)”

New (after 33)

To read: “Seed: adherence to flesh”

34 To read: “Time of harvest maturity”

35 To be deleted

36 To read: “Density of flowers on flowering shoot”

New (after 36)

To read: “Position of flowers” with the states “mainly on old shoots (1), equally on old and new shoots (2), mainly on new shoots (3)”

37 - 47 To be deleted

Test Guidelines for Apricot (Revision)

The Working Party reviewed documents TG/70/3, TWF/30/8, TWF/31/4, TWF/32/15 and comments from the subgroup with Mr. Harsányi (HU) as a leading expert, and made the following main changes in document TWF/32/15:

(i) Material Required, paragraph 1, fourth sentence to read: “It is recommended that the competent authorities prescribe the rootstock”. Paragraph 2, first sentence to read: “The plant material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases”. Second sentence to be deleted.

(ii) Methods and Observations, paragraph 3, last sentence to be deleted.

(iii) Table of Characteristics

Characteristics

- 1 To have explanation added to section VII. Explanations on the Table of Characteristics
- 2 To read: “Tree: number of branches”, to have the following order of states: “few (3), medium (5), many (7)”, to read example variety for the state “many (7)” as “San Castrese”, to be placed after characteristic 3
- 4 To have the states as “predominantly on spurs (1), predominantly on one-year-old shoots (2), equally on spurs and on one-year-old shoots (3)”
- 10 To read: “Leaf blade: green color of upper side”
- 12 Hungary to improve diagram
- 13 To have the state “very long (9)” deleted
- 16 To read: “Leaf blade: profile in cross section”, to have the state “straight (1)” instead of “flat”, to have explanation added to section VII. Explanations on the Table of Characteristics
- 17 To read example variety for the state “short (3)” as “San Francesco” instead of “S. Francesco”
- 20 To read: “Petiole: anthocyanin coloration of upper side”
- 21 To read: “Petiole: predominant number of nectaries”, to have the states as “none or one (1), two or three (2), more than three (3)”
- 22 To read: “Petiole: size of nectaries”
- 23 To read: “Flower: diameter”, to have explanation added to section VII. Explanations on the Table of Characteristics

- 24 To read: “Flower: position of stigma in relation to position of anthers”, to have the states as “below (1), same level (2), above (3)”
- 26 To read: “Petal: color”, to have explanation added to section VII. Explanations on the Table of Characteristics
- 29 To have the state “rhombic (8)” with example variety “Vulcan” added
- 36 Hungary to provide a diagram
- 40 To have the state “not visible (1)” with example variety “Mascot” added with the corresponding changes for the order of states and explanation added to the section VII. Explanations on the Table of Characteristics, New Zealand to check “Mascot”
- 41 To have new characteristic “Fruit: hue of overcolor” with the states as “orange red (1), pink red (2), red (3), purple (4)” to be placed after characteristic 41
- 42 To have the state “absent (1)” added, to be placed after characteristic 40, to have new characteristic “Fruit: glossiness of skin” with the states as “absent or weak (1), weak (3), medium (5), strong (7)” to be placed after characteristic 42
- 43 To read the state “whitish green (1)” instead of “white green”
- 46 To read: “Fruit: weight of stone in relation to weight of fruit”, to have the states as “low (3), medium (5), high (7)”
- 48 Hungary to add diagram
- 49 Asterisks to be added
- 50 To read: “Time of beginning of flowering”, to have explanation added to section VII. Explanations on the Table of Characteristics
- 51 To have explanation added to section VII. Explanations on the Table of Characteristics

(iv) Explanations on the Table of Characteristics, to have Ad. 1: “Tree: vigor” added with the wording: “The vigor of the tree should be considered as the overall abundance of vegetative growth”, Ad. 16: Leaf blade: profile in cross section with the wording: “On spurs or at base of flowering shoots”, Ad. 23: Flower: diameter with the wording: “Petals pressed into horizontal position”, Ad. 26: Petal: color with the wording: “just after opening of sepals”, Ad. 50: Time of beginning of flowering with the wording: “10% open flowers”, Ad. 51: Time of maturity for consumption with the wording: “The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily picked from the tree”. Synonym(s) of Example Varieties to be improved by Hungary.

(v) Technical Questionnaire, 4.4 Virus status to read: “The plant material is virus tested

yes []
no []

If the answer to that question is yes, please indicate against which viruses
.....”

Test Guidelines for Avocado (Revision)

41. The Working Party reviewed documents TG/97/3, TWF/31/8 and comments from the subgroup, with Mr. Barrientos-Priego (MX) as a leading expert, and made the following main changes in document TG/97/3:

(i) Table of Characteristics

Characteristics

- 1 To have wording of the states checked
- 2, 5, 6 To be deleted
- 9 The states (3) and (4) to be checked
- 10 To be deleted, to have three new characteristics: “Leaf blade: length”, “Leaf blade: width”, “Leaf blade: length/width ratio”
- 11, 12 To be checked
- 15 To have new characteristic “Leaf blade: spacing between secondary veins” to be placed after characteristic 15
- 17 To have new wording added to the title of characteristic “on underside”
- 19 To have new characteristic “Petiole: length” to be placed after characteristic 19
- 29 To have the wording “size” replaced by “length”
- 30 To have the wording “basal part” replaced by “stalk end”, the order of states to be checked
- 32 To have diagram added, to have new characteristic “Mature fruit: length of stalk cavity”
- 33 To read: “Mature fruit: presence of neck” with the states “absent (1), present (9)”, to have new characteristic “Mature fruit: neck length” to be placed after new characteristic 33
- 35 To be deleted
- 37 The state “whitish” to be added
- 40 To check if new state “presence of glossiness” to be added
- 43 To be placed after characteristic 32

- 44 To check if the states should be changed
- 51 To have new characteristic “Peduncle: length” to be placed after characteristic 51
- 52 To have new wording added “at room temperature”
- 60 To be deleted
- 63 Example variety to be added
- 65 To have the wording “size” replaced by “length”, to have new characteristic “Fruit: width” to be placed after characteristic 65
- 66 The wording and the last two states to be checked if new characteristic is necessary
- 67 The wording to be checked
- 68 To have the wording “polyembryony” replaced by “multiple sprouting”
- 69 To have two new characteristics “Seed: surface” and “Seed color (on fresh seed)”

Test Guidelines for Persimmon

The Working Party reviewed document TWF/32/16 and comments from the subgroup, with Mr. Atsuta (JP) as the leading expert, and made the following main changes in document TWF/32/16:

(i) Subject of these Test Guidelines

These Test Guidelines apply to all varieties for fruit production of *Diospyros kaki* L. and their hybrids.

(ii) Material Required

Quantity of plant material to read: “five plants (one-year old grafted plants) on rootstocks of *Diospyros kaki* L. or *Diospyros lotus* L.”

(iii) Methods and Observations

Paragraph 3 to read: “Unless otherwise stated, all observations on the tree and the one-year old shoot should be made during the dormant season. All observations on the one-year old shoot should be made on the middle third.”

(iv) Table of Characteristics

Characteristics

- 5 To replace “internodes” with “internode”
- 6 To read: “One-year old shoot: color (sunny side)”

- 9 States to read: “elliptic (1), circular (2), oblong (3)”
- 11 States to read: “circular (1), oblate (2), oblanceolate (3), obovate (4)”
- 12 To read: “One-year old shoot: size of bud” and be moved to after characteristic 9
- 13 To read: “One-year old shoot: shape of apex of bud” and moved to after characteristic 9
- 14 To read: “One-year old shoot: position of bud in relation to axis” and moved to after characteristic 9
- 17 States to read: “elliptic (1), ovate (2), obovate (3)”
- 19 To be moved after characteristic 20
- 20 States to read: “narrow acute (1), broad acute (2), obtuse (3), rounded (3)”
- 21 To read: “Tree: sex expression of flowers”
- 23 States to read: “circular (1), rounded rhombic (2), rhombic (3), regular cruciform (4), irregular cruciform (5)”
- 27 State 8 “square” to be deleted
- 28 States to read: “circular (1), rounded square (2), square (3)”
- 29 State 5 to read: “retuse”
- 30 States to read: “absent or weak (1), intermediate (2), strong (3)”
- 31 To check if this characteristic is the same as “humidity markings”. States to read: “absent or weak (1), intermediate (2), strong (3)”.
- 32 States to read: “absent or weak (1), intermediate (2), strong (3)”
- 38 To read: “Non astringent varieties only: Fruit: color of skin at time of ripeness for eating”. State 5 to read: “dark purple”
- 39 To read: “Astringent varieties only: Fruit: color of skin at time of ripeness for eating”.
- 40 To read: “Non astringent varieties only: Fruit: color of flesh at time of ripeness for eating”.
- 41 To read: “Astringent varieties only: Fruit: color of flesh at time of ripeness for eating”. State 6 to read: “medium brown”
- 45 To read: “Fruit: calyx size compared with fruit diameter” with the states “smaller (1), approximately the same (2), larger (3)”
- 46 To read: “Fruit: attitude of calyx”

- 44-48 Characteristics to be moved after characteristic 37
- 49 Asterisk to be deleted
- 50 States to read: “narrow elliptic (1), broad elliptic (2), elliptic (3), ovate (4), broad ovate (5), irregular ovate (6)”. The illustration is to be clarified.
- 53 To be moved to after characteristic 51.
- 54 To read: “Non astringent varieties only: Time of ripeness for eating”.
- 55 To read: “Astringent varieties only: Time of ripeness for eating”.
- 56 To be deleted
- 57 Asterisk to be deleted
- 59 To read: “Fruit: astringency and pollination”

(iv) Explanations on the Table of Characteristics

- Ad 27 Illustrations for states 1 and 2 to be reversed. Illustration for state 6 to be more circular
- Ad 29 Illustration for state 1 to show a more acute apex angle.
- Ad 30, 31 Legend to be provided
- Ad 32 Illustrations needed for all states. Legend to be provided.
- Ad 33 Illustrations needed for all states. Illustrations for different states to use the same perspective. Legend to be provided.
- Ad 35 Illustration to show part of overall fruit profile to highlight the shape of the calyx attachment.
- Ad 57, 58 Explanation to be simplified and clarified.

Test Guidelines for Prickly Pear (*Opuntia*)

The Working Party reviewed documents TWF/31/7 and TWF/32/7 and comments from the subgroup with Mr. Barrientos-Priego (MX) as a leading expert, and made the following main changes in document TWF/32/7:

(i) Table of Characteristics

Characteristics

- 2 To be deleted

- 18 To have a new characteristic added: “Cladode: bicolored spines” with the states as: “absent (1), present (9)”
- 23 To have a new characteristic added: “Cladode: shape of central spine in cross section” with the states as: “elliptic (1), circular (2), triangular (3)”
- 36 To be deleted

Test Guidelines for Quince (Revision)

The Working Party noted documents TG/100/3, TWF/31/10, TWF/32/17 and comments from the subgroup with Mr. Schulte (DE) as a leading expert and made the following main changes in document TWF/32/17:

(i) Material Required, paragraph 1 to read: “5 two-year-old grafted plants or grafting material sufficient for 5 trees”.

(i) Table of Characteristics

Characteristics

- 1 To have explanations added to Chapter VIII. Explanations on the Table of Characteristics, to have example variety “Gutui de Husui” for the state “weak (3)” replaced by “Moldovenești”, to have example variety “Vranja” added for the state “strong (7)”
- 4 To have asterisk deleted, to have example variety “Champion” added for the state “medium (5)”
- 5 To read: “One-year-old shoot: pubescence (upper third)”
- 6 To have example variety “Angerskaya” added for the state “grey brown (1)” and to have it checked by Germany
- 9 To read example variety as “Leskovacz” throughout the document
- 10 To have the states as “short (3), medium (5), long (7)”, to have example variety “Vranja” added for the state “long (7)”
- 12 To have example variety “Constantinopel” added for the state “circular (2)”
- 14 To read: “Leaf blade: angle at apex (excluding tip)”, to read the state (2) as “right-angled”, to have example variety “Portugal” for the state “right-angled (2)” replaced by “Mezötúri”, to have example variety “Champion” added for the state “obtuse (3)”
- 15 To read: “Leaf blade: length of tip”
- 16 To have the states as “straight (1), concave (2)”
- 17 To have the states as “absent or very weak (1), weak (3), medium (5), strong (7)”

- 19 To have example variety “Bereczki” for the state (1) deleted, to have example variety “Constantinopel” added for the state “medium (5)”, to read example varieties as “Pear Shaped” and “Aurii” throughout of the document
- 20 To have example varieties as “Turunchukskaya” and “Vranja” for the state “large (7)”
- 21 To have the states as “white (1), light pink (2), dark pink (3)”, to have example variety “Angerskaya” for the state (1), “Mezötúr” for the state (2) and “Vranja” for the state (3), to have explanations added to the section VIII. Explanations on the Table of Characteristics
- 22 To read: “Flower: arrangement of petals”, to have the state “free (1)” instead of “apart”, Germany to provide a diagram
- 23 To have the state “square (3)” instead of “approximately square”, to have example variety “Champion” instead of “Smyre”, to have new characteristic: “Petal: undulation of margin” with the states “weak (3), medium (5), strong (7)” and with example varieties “Constantinopel” for the state (3), “Turkey No. 4” for the state (5), and “Şafranii” for the state (7), this new characteristic to be placed after characteristic 23
- 24 To read: “Flower: position of stigma in relation to anthers”, to have example variety “Bereczki” instead of “Constantinopel”, and “Aurii” instead of “Maliforme”, to have example variety “Mezötúri” added for the state “below”, to have the order of states as “1, 2, 3”, to be placed after characteristic 22
- 25 To be deleted
- 27 To have brackets deleted in the title of characteristic, to have the following order of the states: “elliptic (1), circular (2), square (3), obovate (4), pyriform (5), to have example variety “Jurak” instead of “Maliforme Aurii”
- 29 To have the state (2) as “towards calyx end”
- 30 To read: “Fruit: narrowing towards stalk end”
- 31 To read: “Fruit: length of narrowing towards stalk end”
- 32 To read: “Fruit: type of narrowing towards stalk end”, to have example variety “Bereczki” added for the state (1), to have example varieties for the state (2) as “Constantinopel” and “Şafranii”
- 33 To read: “Fruit: prominence of ribs at stalk end”, to have the state “absent or very weak (1)” added
- 34 To read: “Fruit: prominence of ribs at calyx end”, to have the state “absent or very weak (1)” added
- 35 To read: “Fruit: presence of stalk cavity”, Germany to provide a diagram, to have example variety “Bereczki” instead of “Champion”

- 38 To have example variety “Champion” added for the state “yellow green (1)”, to have example variety “Moldovenești” added for the state “yellow orange (3)”
- 40 To have example variety “Konstantinopel” instead of “Champion”
- 41 To read: “Time of beginning of fruit ripening”, to have explanations added to section VIII. Explanations on the Table of Characteristics

(ii) Explanations on the Table of Characteristics, To have Ad. 1: Plant: vigor added with the wording: “The vigor of the tree should be considered as the overall abundance of vegetative growth”, Ad. 21: Flower: color added with the wording: “The flower color should be observed on the first day of opening”, Ad. 41: Time of beginning of fruit ripening added with the wording: “The time of fruit ripening should be considered as the time of picking ripeness, when the fruit is most easily removed from the plug”.

Test Guidelines for Raspberry (Revision)

The Working Party reviewed documents TG/43/6, TWF/31/11, TWF/32/18 and comments from the subgroup with Mr. Schulte (DE) as a leading expert and made the following main changes in document TWF/32/18:

(i) Material Required, paragraph 2, sentence: “It should preferably not be obtained from *in vitro* propagation” to be deleted.

(ii) Methods and Observations, paragraph 3, to read: “All observations on the very young shoot should be made when the shoots are about 15 cm long. The number of very young shoots should be considered as the number per meter length of the row before thinning for the first time, beginning with the second year”. Paragraph 4 to read: “All observations on the current season’s cane should be made when the canes are about 1 m to 1,50 m long. For summer bearing varieties these observations should be made just after harvest, for autumn bearing ones just before or at harvest. The bloom of the current season’s cane should only be observed when the cane is fully grown. Observations on spines should be made on the middle third of the cane”. Paragraph 5 to read: “Observations on the vegetative bud should be made on the middle third of the cane”. Paragraph 6 to read: “The dominant color of the dormant cane should be observed as the color of the bark in an unpeeled area”. Paragraph 7 to read: “All observations on the leaf should be made on fully developed leaves from the middle third of the cane”. Paragraph 8 to read: “Unless otherwise stated, all observations on the fruit should be made on fruit picked during the second and third harvest.” Paragraph 10 to read: “The time of beginning of flowering should be considered as the time when 10% of the flowers have opened.” Paragraph 11 to be deleted.

(iii) Table of Characteristics

Characteristics

- 1 To read: “Plant: habit”, to have the notes as “1, 2, 3”, to read the state (2) as “semi-upright”
- 2 To have the state “very many (9)” added and to have example variety “Sumner” for this state

- 3 To read: “Very young shoot: presence of anthocyanin coloration of apex”
- 4 To read: “Very young shoot: intensity of anthocyanin coloration of apex”
- 5 to 10 To have “shoot” replaced by “cane”
- 8 To read: “Current season’s cane: length of vegetative bud”
- 10 To have the states as following: “brownish grey (1), greyish brown (2), brown (3), purplish brown (4), brownish purple (5)”, Germany to check example varieties
- 11 To read: “Cane: presence of spines”
- 12 To read: “Spines: density on middle third of cane”
- 13 To read example variety as “Malling Exploit” instead of “Malling Exploid” throughout the document
- 15 To have the following order of states: “green (1), brownish green (2), greenish brown (3), brown (4), purplish brown (5), brownish purple (6), purple (7)”, to read example variety as “Pujallup” instead of “Pajullap” throughout the document, Germany to check example varieties
- 16 To read example variety as “Rubacca” instead of “Rubaca” throughout the document
- 17 To read: “Leaf: predominant number of leaflets”, to have the states (2) as “equally three and five” instead of “sometimes three, sometimes five”
- 18 To read: “Leaf: profile of leaflets in cross section”
- 19 To read: “Leaf: blistering”, New Zealand and Germany to check this new wording
- 20 To have the notes as “1, 2, 3”
- 22 To read: “Pedicel: number of spines”, to have the following order of states: “absent or very weak (1), few (3), medium (5), many (7), very many (9)”, to have example variety “Watson” for the state “very many (9)” instead of “Golden Bliss”
- 23 To read: “Pedicel: presence of anthocyanin coloration”
- 24 To read: “Pedicel: intensity of anthocyanin coloration”
- 26 To have example varieties as “Malling Landmark, Ontario (1), Schönemann (2), Rucami (3)”
- 28 To be deleted, to have three new characteristics as: “Fruit: lengths”, “Fruit: width”, and “Fruit: shape in lateral view”, to be placed after characteristic 27, Germany to provide example varieties
- 29 To be placed after characteristic 30, to have example variety “Resa” for the state (5) deleted

[25.] To have example variety “Nootha” added for the state “very weak (1)”

34 To read: “Fruit: main bearing time”, to have the states as “on previous year’s cane in summer (1), on current year’s cane in autumn (2)”

35 To read: “Only varieties whose main fruiting is on previous year’s cane in summer:
Plant: time of vegetative bud burst”

36 To read: “To read: “Only varieties whose main fruiting is on previous year’s cane in autumn: Time of shoot emergence”

37 To read: “Time of beginning of flowering on previous year’s cane”

38a To read: “Time of beginning of fruit ripening on previous year’s canes”, to have explanations added to the section VII. Explanations on the Table of Characteristics

38b To read: “Time of beginning of fruit ripening on current year’s canes”, to have explanations added to the section VIII. Explanations on the Table of Characteristics

39a To read: “Length of fruiting period on previous year’s canes”

39b To read: “Length of fruiting period on current year’s canes”

(iv) Explanations on the Table of Characteristics, to check in general if all diagrams correspond with changes made. To have Ad. 38a: “Length of fruiting period on previous year’s canes” and Ad. 38b: “Length of fruiting period on current year’s canes” added with the wording: “The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed from the plug”.

(v) Technical Questionnaire, 4.4 Virus status to read: “The plant material is virus tested

- yes []
- no []

If the answer to that question is yes, please indicate against which viruses
.....”

[Annex VIII follows]

ANNEX VIII

LIST OF LEADING EXPERTS

Species	Basic document	Leading experts	Interested experts (countries) (for name of experts see List of Participants, Annex I)
Cherimola	TWF/32/6	Mr. Atsuta, JP and Mr. Barrientos-Priego, MX	AR, AU, BR, ES, NZ, PT
Apple	TG/14/8	Mrs. Lean, GB	AR, AU, CZ, DE, ES, FR, HU, IT, JP, MX, NZ, PO, PT, RO, ZA
Apricot	TWF/32/15	Mr. Harsányi, HU	AR, ES, FR, IL, IT, NZ, RO, ZA
Avocado	TG/97/3, TWF/31/8	Mr. Barrientos-Priego, MX	AU, BR, ES, IL, NZ, ZA
Fig	TWF/30/4	Mr. Bar-Tel, IL and Mr. Bergamini, IT	AR, DE, ES, FR, JP, PT
Mango	TG/112/3	Mrs. Costa, AU and Mrs. Buitendag, ZA	BR, ES, MX
Passion Fruit	New	Mr. Bar-Tel, IL and Mrs. Buitendag, ZA	BR, KE, ZA
Persimmon	TWF/32/16	Mr. Atsuta, JP	IL, IT, NZ, PT
Pineapple	New	Mr. Guiard, FR and Mr. Salaices, ES	BR, PT, ZA
Prickly Pear (Opuntia)	TWF/32/7	Mr. Barrientos-Priego, MX	ES, IL, IT, ZA
Quince	TWF/32/17	Mr. Schulte, DE	AR, FR, GB, HU, RO
Raspberry	TWF/32/18	Mr. Schulte, DE	AR, CA, FR, GB, HU, IT, NZ, PO, ZA
Trifoliata Oranges	TWF/32/14	Mr. Chomé Fuster, ES and Mrs. Buitendag, ZA	AR, BR, FR, IL, IT, JP, MX, PT

For final discussion

Grapefruit and Pummelos	TWF/32/2	Mrs. Buitendag, ZA	AR, ES, FR, IL, IT, JP, MX
Lemons and Limes	TWF/32/3	Mr. Chomé Fuster, ES and Mrs. Buitendag, ZA	AR, FR, IL, IT, JP, MX
Mandarin	TWF/32/4	Mr. Chomé Fuster, ES and Mrs. Buitendag, ZA	AR, FR, IL, IT, JP, MX
Oranges	TWF/32/5	Mr. Chomé Fuster, ES and Mrs. Buitendag, ZA	AR, FR, IL, IT, JP, MX

[End of Annex VIII and of document]