|  |  |
| --- | --- |
|  | E |
| International Union for the Protection of New Varieties of Plants |  |

|  |  |
| --- | --- |
| Technical Working Party for Fruit Crops  Forty-Ninth Session Santiago de Chile, Chile, November 19 to 23, 2018 | TWF/49/12  Original: English  Date: November 23, 2018 |

report

adopted by the Technical Working Party for Fruit Crops

Disclaimer: this document does not represent UPOV policies or guidance

## Opening of the session

The Technical Working Party for Fruit Crops (TWF) held its forty-ninth session in Santiago de Chile, Chile, from November 19 to 23, 2018. The list of participants is reproduced in Annex I to this report.

The session was opened by Mr. Jean Maison (European Union), Chairman of the TWF, who welcomed the participants and thanked Chile for hosting the TWF session.

The TWF was welcomed by Mr. Guillermo Federico Aparicio Muñoz, Head, Seed Division, *Servicio Agrícola y Ganadero* (SAG), Ministry of Agriculture.

The TWF received a presentation by Mr. Guillermo Federico Aparicio Muñoz, on plant variety protection in Chile. A copy of the presentation is provided in Annex II to this report.

## Adoption of the agenda

The TWF adopted the agenda as reproduced in document [TWF/49/1 REV.](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=420990).

## Short reports on developments in plant variety protection

### (a) Reports on developments in plant variety protection from members and observers

The TWF noted the information on developments in plant variety protection from members and observers provided in document TWF/49/3 Prov. The TWF noted that reports submitted to the Office of the Union after November 9, 2018, would be included in the final version of document TWF/49/3.

### (b) Reports on developments within UPOV

The TWF received a presentation from the Office of the Union on latest developments within UPOV, a copy of which is provided in document [TWF/49/2](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=420973).

## TGP documents

The TWF considered document [TWP/2/1](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=404869).

### Matters for adoption by the Council in 2018

The TWF noted the revisions of TGP documents previously agreed by the TC which had been adopted by the Council at its fifty-second ordinary session, held in Geneva on November 2, 2018, on the following matters:

(i) Drafter’s Kit for Test Guidelines (document TGP/7);

(ii) Presentation of different types of example varieties (document TGP/7)

### Matters for adoption by the Council in 2019

The TWF noted the revisions of TGP documents previously agreed by the TC on the following matters, which would be adopted by the Council in 2019:

(i) Procedure for the adoption of draft Test Guidelines (document TGP/7);

(ii) Examining DUS in Bulk Samples (document TGP/8);

(iii) Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions (document TGP/8);

(iv) Assessing Uniformity by Off-Types on Basis of More than One Growing Cycle or on the Basis of Sub Samples (document TGP/10);

(v) Illustrations for shape and ratio characteristics (document TGP/14)

In relation to procedure for the adoption of Test Guidelines by correspondence, the TWF noted that the TC had considered the proposal for the revision of document TGP/7 “Development of Test Guidelines” to reflect the introduction of a procedure for adoption of Test Guidelines by correspondence, as set out in document TC/54/16, paragraph 14, and received presentation by the UPOV Office, a copy of which had been provided as an addendum to document TC/54/16. The TC agreed that guidance in document TGP/7 should be revised to read as follows:

“2.2.7 STEP 7 Consideration of Draft Test Guidelines by the TC-EDC

“2.2.7.1 The TC-EDC has been established by the Technical Committee to examine drafts of all Test Guidelines, produced by the TWPs, before these are put forward for adoption by the Technical Committee. The role of the TC-EDC is to ensure consistency of the Test Guidelines with the requirements of document TGP/7 and to check the alignment of texts across all the official UPOV languages. It does not conduct a substantive technical review of the Test Guidelines. The members of the TC-EDC are selected by the TC, both to provide broad experience of the UPOV system and also to represent the UPOV languages – English, French, German and Spanish. The Chairperson of the TC-EDC is provided by the UPOV Secretariat.

“2.2.7.2 The TC-EDC reviews the draft Test Guidelines, taking into account any specific instructions from the Technical Committee, and makes a recommendation on whether the Test Guidelines are suitable for adoption (Step 8). It may make a proposal to the Technical Committee for adoption subject to amendments of an editorial nature, which it specifies.

“NEW Unless otherwise agreed by the TC, the TC-EDC meets twice each year, once in the period March/April and once in conjunction with the TC session (October/November). The TC-EDC will consider Test Guidelines submitted by the Technical Working Parties at least 14 weeks prior to the TC‑EDC meeting. Test Guidelines submitted less than 14 weeks prior to the TC‑EDC meeting will be considered at its subsequent meeting.

“NEW The potential outcomes for Test Guidelines considered by the TC-EDC are as follows:

1. no changes required to the Test Guidelines, or strictly editorial changes for which recommendations are agreed by the TC-EDC; or
2. editorial clarifications required; or
3. technical issues to be resolved.

“NEW In cases where no changes are required to the Test Guidelines, or strictly editorial changes for which recommendations are agreed by the TC-EDC, the Test Guidelines will be put forward for adoption by the Technical Committee.

“NEW The following procedure applies for Test Guidelines when editorial clarifications are required:

* request for clarifications is transmitted to the Leading Expert;
* clarifications to be provided within four weeks;
* if the clarifications are agreed by the TC-EDC, the Test Guidelines will be recommended for adoption at the TC-EDC meeting;
* the Test Guidelines are considered for adoption by the TC.

“NEW The following procedure applies for Test Guidelines with technical issues to be resolved:

* technical issues to be transmitted to the Leading Expert
* the technical issues are to be addressed at the respective Technical Working Party by means of a TWP document prepared by the Leading Expert at least four weeks before TWP session (new draft Test Guidelines should not be prepared)
* resolution of the issues to be provided to the TC-EDC at least seven weeks before the TC-EDC meeting;
* if agreed by the TC-EDC, the Test Guidelines would be recommended for adoption at the TC‑EDC meeting;
* Test Guidelines are considered for adoption by the TC.

“2.2.8 STEP 8 Adoption of Draft Test Guidelines by the Technical Committee

“2.2.8.1 The Technical Committee will, on the basis of the recommendations of the TC‑EDC, decide whether to adopt the Test Guidelines, or refer them back to the TWP concerned.

“NEW The Technical Committee may adopt Test Guidelines at its session or by correspondence. Test Guidelines may be adopted by correspondence according to the following procedure:

* The draft Test Guidelines are circulated to the TC for adoption by correspondence with the recommendations by the TC-EDC;
* The draft Test Guidelines are considered as adopted if no comments are received within six weeks;
* If any comments are received, the draft Test Guidelines are referred to the relevant TWP to address those comments.

“2.2.8.2 Where the Technical Committee adopts the Test Guidelines, the Office will make all amendments agreed by the Technical Committee, which will be recorded in a report of the relevant Technical Committee meeting. The Office will then publish the adopted Test Guidelines.

The TWF noted that TC had agreed that a suitable timeline for the publication of adopted Test Guidelines should be added to the guidance.

The TWF noted that TC had agreed that the procedure for the adoption of Test Guidelines by correspondence should be incorporated in the content of the preparatory workshops for the TWPs.

### Matters to be considered by the Technical Committee

#### TGP/5: Section 1: “Model administrative agreement for international cooperation in the testing of varieties”

The TWF noted that the proposed revision of document TGP/5 Section 1 for the inclusion of guidance on confidentiality of molecular information had been adopted by the Council at its fifty-second ordinary session, held in Geneva on November 2, 2018.

### Future revisions of TGP documents

The TWF noted that the following matters concerning a possible revision of TGP documents had been considered by the TC, at its fifty-fourth session, and noted that the conclusions of the TC would be reported to the TWPs at their sessions in 2019:

(i) Characteristics which only apply to certain varieties (document TGP/7);

(ii) The Combined-Over-Years Uniformity Criterion (COYU) (document TGP/8);

(iii) Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS) (document TGP/15);

(iv) UPOV color groups (document TGP/14)

### Possible future revisions of TGP documents

#### TGP/7: Development of Test Guidelines

##### Proprietary method of assessment for male sterility

The TWF noted that the TC had noted the importance of Test Guidelines for international harmonization and agreed that members should propose any alternative methods or markers for DNA-marker tests in Test Guidelines.

##### Suitability of characteristics in previous versions of Test Guidelines

The TWF noted that the TC had considered a situation where existing Test Guidelines characteristics did not meet the requirements set out in document TGP/7. The TC noted that the characteristics should meet the requirements for a characteristic set out in the General Introduction, which included provisions for characteristics observed in bulk samples, and agreed that it was the responsibility of the TWPs to assess whether these should be kept as DUS characteristics.

#### TGP/12: Guidance on Certain Physiological Characteristics

The TWF noted that the TC had noted that the use of disease resistance characteristics would be discussed at the TWV, at its next session, and had agreed to wait for the outcome of those discussions before developing further guidance.

#### TGP/15: Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)

The TWF noted that the TC at its fifty-fourth session in Geneva on October 29 and 30, 2018, considered documents TC/54/23 and TGP/15/2 Draft 1 and had agreed the following.

##### Revision of the model “Combining phenotypic and molecular distances in the management of variety collections”

The TWF noted that the The TC had noted the report of the BMT, at its seventeenth session, that the establishment of an additional threshold for genetic distance below GAIA distance 2 had not been implemented in France at that time. The TC had recalled that the nature of document TGP/15 was to present examples of the use of molecular markers in DUS examination among UPOV members.

The TWF noted that the TC had agreed with the BMT that the Model “Combining Phenotypic and Molecular Distances in the Management of Variety Collections” of document TGP/15, Section 2.2, should be revised at a later stage once an additional threshold level had been implemented in France.

##### Proposal for inclusion of a new model “genetic selection of similar varieties for the first growing cycle”

The TWF noted that the The TC had noted that the BMT and TWV had agreed to propose a new model “Genetic selection of similar varieties for the first growing cycle: example French Bean” for inclusion in document TGP/15 on the basis of a simplified version of the draft text presented in document TGP/15/2 Draft1, as set out in document TC/54/23, paragraphs 24 and 26.

The TWF noted that the TC had agreed with the inclusion of a new model “Genetic selection of similar varieties for the first growing cycle: example French Bean” in document TGP/15 on the basis of the proposal by the Netherlands, as amended by the TC-EDC, as set out in Annex III to document TC/54/31.

### Program for the development of TGP documents

The TWF noted the program for the development of TGP documents, as set out in Annex IV to document TWP/2/1 and as updated in Annex IV of document TC/54/5 Rev..

### TGP/7: Development of Test Guidelines

#### Duration of DUS in the fruit sector

The TWF considered document [TWP/2/9](https://upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=405391) and noted that the TC, at its fifty-fourth session in Geneva on October 29 and 30, 2018, had agreed that the following sentence should be included as standard wording in Test Guidelines:

“The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.”

### TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability

#### Method for more than one single test (year)

The TWF considered document [TWP/2/10](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=405877) and noted that the TC, at its fifty-fourth session, had considered the proposal for the revision of guidance in document TGP/8/2: Part II: Section 8: Subsection 8.1.7: “Method for more than one single test (year)”, on the basis of the draft set out in document TC/54/19, Annex II, and in conjunction with the comments by the TWPs, at their sessions in 2018.

The TWF noted that the TC had noted that guidance on the same matter had been developed for document TGP/10 and agreed that the current guidance in document TGP/8/2: Part II: Section 8: Subsection 8.1.7 should be replaced by a cross-reference to the guidance new on “Assessing uniformity by off-types on the basis of more than one growing cycle or on the basis of sub-samples” to be included in document TGP/10 “Examining Uniformity.”

### TGP/14: Glossary of Terms Used in UPOV Documents

#### Illustrations for shape and ratio characteristics

The TWF considered document [TWP/2/11](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=405878) and noted the conclusions of the TC, at its fifty-fourth session.

The TC had noted that grids could be used to clarify the states of expression and the differences between states of expression and to describe the range of expression for shape characteristics.

The TC had noted the discussions on whether to identify situations when grids should and should not be used to explain states of expression in shape characteristics and had agreed that the TWPs should decide on a case-by-case for each Test Guidelines according to the guidance in TGP/14 “Glossary of Terms Used in UPOV Documents”. The TC had recalled that, if grids were not used, it was necessary for Test Guidelines to explain the differences between shapes by another clear and objective way.

The TC had noted the discussions on whether to provide guidance on how grids can clarify how differences in notes can be used for the assessment of distinctness, in accordance with the guidance in the General Introduction and document TGP/9.

The TC had noted that the GAIA software was an example on how differences in notes could be used for the assessment of distinctness. The TC had agreed to request the UPOV Office to prepare a document for discussion at the TWPs providing explanations on QN and PQ characteristics from document TG/1/3 “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of new Varieties of Plants”. The TC had agreed that such discussions should be dissociated from the discussions on the use of grids to illustrate shape and ratio characteristics.

#### UPOV color groups

The TWF considered document [TWP/2/12](http://upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=405416), and noted that the TC, at its fifty-fourth session, had considered the proposals for the revision of the list of UPOV Color Groups and consequential changes to document TGP/14, as set out in document TC/54/22, Annexes I and II. The TC had agreed that the guidance on UPOV color names should not be used for variety denomination purposes and had agreed that the proposed guidance in document TC/54/22, Annex II, should be revised to remove the mention to variety denominations.

The TWF noted that the TC had agreed that the proposals should be considered by the TWPs and reported to the TC, at its fifty-fifth session.

The TWF noted that TC had considered whether to keep the previous list of UPOV Color groups within document TGP/14 in order to avoid confusion and had agreed to recommend keeping both versions of the list in the document.

The TWF had noted that TC had agreed to propose the revision of document TGP/14 to include guidance on the factors to be considered for creating color groups for grouping of varieties and organizing the growing trial, as follows:

“Factors to be considered for creating color groups

“When using the color of a plant part for grouping of varieties, a very clear and large difference between the colors is required. However, the color groups are also used in the Technical Questionnaire for applicants who have no RHS Colour Chart. Therefore the groups need to be small enough so that applicants are able to give an adequate state of expression for the characteristic.

“The following factors have to be considered when creating color groups for grouping:

1. range of variation of the color of the plant part within the species
2. difference between colors for varieties to be considered clearly distinguishable
3. possible influence of the environment on the color of the plant part.

“Depending on the species and the plant part observed the color groups for grouping can be different. Examples for color groups in grouping characteristics of different Test Guidelines are listed in the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Guidelines | Campanula (TG/305/1) | Hosta (TG/299/1) | Cordyline (TG/317/1) | Osteospermum (TG/175/5) |
| Characteristic | Corolla: main color of inner side | Leaf blade: color covering the largest surface area | Leaf: secondary color | Ray floret: main color of middle part |
| Color groups  for grouping | white | white | white | white |
| pink | light yellow | yellow | yellow |
|  | red purple | medium yellow | green | orange |
|  | purple | dark yellow | red | pink |
|  | blue | light green | purple | red |
|  |  | medium green | brown | purple |
|  |  | dark green | blackish | violet |
|  |  | blue green |  |  |

“It should be emphasized that not all groups are necessarily clearly distinct from each other when information is used that does not come from the same source (same location, same observer) and cannot always be used to exclude varieties from the trial. E.g. in Cordyline for the characteristic ‘Leaf: secondary color’ it might not be possible to clearly distinguish between ‘brown’ and ‘blackish’ when looking at photos on the internet or in a plant catalogue.”

The TWF noted that TC had agreed that the following text in Annex II of document TC/54/22 should be deleted:

|  |  |  |  |
| --- | --- | --- | --- |
| RHS Color Group (heading on each sheet) | 29 | Red Group | Used by the CPVO for checking colors in proposals for variety denominations. |

## Guidance for drafters of Test Guidelines

The TWF considered document [TWP/2/8](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=405836).

The TWF noted the proposals presented by the TWPs, at their sessions in 2017, for further improvements to the web-based TG template, as set out in paragraphs 7 to 12 of document TWP/2/8.

The TWF noted the issues on the web-based TG template addressed during 2017, as set out in paragraphs 13 to 22 of document TWP/2/8.

The TWF noted the issues currently being addressed on the web-based TG template, as set out in paragraph 23 of document TWP/2/8.

The TWF noted that training on the web-based TG template would be provided to all TWPs, at their sessions in 2018.

## Experiences with new types and species

The TWF noted the report by an expert from China on *Ziziphus jujuba*, (common names: Jujube, Red date, Chinese date, Korean date, or Indian date (a species of *Ziziphus* in the buckthorn family (*Rhamnaceae*), and on Goji (*Lycium* L.).

## Management of variety collections

The TWF noted that no presentations had been received by the Office and therefore agreed to postpone discussions on this agenda item to its fiftieth session to be held in 2019.

## DUS examination of mutant varieties of apple

The TWF considered document TWF/49/8 and noted the developments reported by an expert from the European Union since the forty‑eighth session of the TWF in 2017.

The TWF discussed the situation where a variety is bred in a certain environment, DUS tested in another environment and not distinct in the DUS test. The breeder may bring indications that their variety may be distinct in the environment where it has been bred. The group noted that this problem is less likely to take place in countries having a system of DUS testing at breeders premises since the DUS test would take place under the conditions desired by the breeder. It also noted that because of the interaction GxE, a variety may not necessarily be dictinct from another variety in all environments. The TWF noted that investigations are taking place in this respect in the European Union. The TWF invited the expert from the European Union to report on the progresses made on that subject matter and the work done at its next session.

The TWF agreed that, in the case of DUS examination of mutant varieties of apple, the exchange of information among DUS offices was important in order to ensure that authorities were aware of all existing potentially similar varieties.

The TWF agreed that the expert from the European Union should continue to coordinate the project to exchange information among authorities involved in DUS testing of apple to share information, as it provided an important source of information on the most similar varieties. It further encouraged all members involved in DUS testing of apple to contribute to this exchange of information.

## Matters relevant in DUS examination for the fruit sector

The TWF considered document [TWF/49/11](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=420962) and noted the information provided by an expert from the European Union.

The TWF noted the differences in the observation of some characteristics by different examiners in the assesment of similar fruits. It recalled the importance of the quality of the Test Guidelines for international harmonization and harmonized variety descriptions and in particular the relevance of good explanations in order to limit the differences in the observation by different examiners.

The TWF agreed on the importance to have a common way to make measurements and allocate notes, and, in that regard, encouraged the organization of practical exercises among DUS examiners. It further suggested to organize practical exercises at the fringes of the preparatory workshop during the TWPs to compare ways to observe/ measure and potentially develop proposals for improving Test Guidelines.

The TWF welcomed the idea raised by the representatives of Canada and Chile on producing tutorials (e.g. short videos) to explain how to make measurement/ observation in a simple and clear manner. It invited experts from Canada and Chile to report at its next session on possible standardized approaches, which could also be used for other crops.

The TWF also received a presentation by an expert from the European Union on the CPVO project on a ring test for strawberry. A copy of the presentation would be reproduced in an addendum of document TWF/49/11.

The TWF noted the differences between the observation of the same characteristics on the same varieties by different examiners in different countries. However, the TWF noted the different conditions in the growing cycle which might have created variation between trials.

The TWF invited the expert from the European Union to report on the new developments in the ring test for Strawberry at its next session.

## Impact of revisions of states of expression of existing characteristics in the revision of Test Guidelines

The TWF considered document [TWF/49/9](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=420936) and noted that no presentations had been received by the Office. The TWF noted the comment made by the representative of France on the additional work required for DUS centers and examiners following a change in the states of expression of existing characteristics in the revision of Test Guidelines. The TWF agreed that this should be discussed during the revisions of Test Guidelines, taking into consideration all potential advantages in terms of harmonization and reliability of DUS examination and possible impact for users.

The TWF agreed not to continue discussion on this agenda item.

## Review of the proposal for guidance for the development of grids for shape illustration in Test Guidelines

The TWF considered document [TWF/49/10](https://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47212&doc_id=420961) and noted that no presentations had been received by the Office. The TWF noted the conclusion of the TC on this topic (see paragraphs 29 to 31 of this document) and therefore agreed to not continue discussions on this agenda item at its session to be held in 2019.

## Matters to be resolved concerning Test Guidelines put forward for adoption to the Technical Committee

### \*Black Walnut

The TWF considered document TWF/49/7, presented by Ms. Nuria Urquía Fernández (Spain) and agreed the following:

|  |  |
| --- | --- |
| Cover page | - to add “*Juglans* ×*intermedia* Jacques” as synonym to “*Juglans nigra* x *Juglans regia*”  - to check whether “*J*. x *paradox*” as hybrid binomial for “*Juglans hindsii* x *J. regia”*  *TWF: agreed* |
| 2.3 | to read “5 trees (one-year-old grafts). The rootstock to be used is the progeny Ng209xRa or any other variety specified by the authority”  *TWF: agreed* |
| 3.3.3 | to be moved to 3.1  *TWF: agreed* |
| 4.2.3 | to be deleted  *TWF: agreed* |
| Char. 4 | - state 1 to read “absent or rudimentary”  - state 2 to read “fully developed”  *TWF: agreed* |
| Char. 5 | to delete example variety “Eurowalnut B03”  *TWF: agreed* |
| Char. 11 | to read “Catkin: presence ~~of fully developed catkins~~”  *Leading Expert: to read “Catkin: presence at Dm stage”*  *TWF: to read “Catkin: presence* *of fully developed catkins”* |
| Char. 13 | to check wording and use same approach as in Walnut (lateral/ventral view)  *Leading Expert: yes, it should read “ventral view” as in the Test Guidelines for Walnut* |
| Char. 15 | to read “Nut: shape of apex ~~perpendicular to sature~~” (see char. 14 and 8.2)  *Leading Expert: agreed* |
| Ad. 2 | to delete last sentence (covered by growth stage 2)  *Leading Expert: agreed* |
| Ad. 3 | to read “...  High 17 < number of leaflets < 21  Very high 21 >number of leaflets”  *Leading Expert: agreed* |
| Ad. 6 | to read “Female flower is considered conspicuous if flowers are present at stage Df (see 8.3). Female flower is considered non conspicuous when the flowers appear only ~~are observed~~ when the leaves are fully developed.”  *Leading Expert: agreed* |
| Ad. 11 | to read “Observations on the presence of fully developed catkins should be made between stages Bm and Dm (see 8.3).”  *Leading Expert: to keep it as it is*  *TC-EDC/Oct18: What means fully developed, interaction between fully developed and growth stages/* *phenological stages?*  *Leading Expert: Fully developed is when polinic sacs are full. Sentence to read “Observations on the presence of fully developed catkins should be never before Dm (see 8.3).”*  *TWF: to read “Observations on the presence of fully developed catkins should be* made between stages Bm and Dm (see 8.3)*. Fully developed catkins means that the polinic sacs are full.”* |
| Ad. 12 | - to check whether to be observed at stage Cm (Bm too eraly?)  - to check whether Chars 11 and 12 can be observed at the same time  *Leading Expert: It is not that it has to be observed at stage Bm or Cm, it is in the interval from Bm to Cm. Ad 11: The expert explains that catkins sometimes can be seen badly developed at Bm, but some other times it is neccesary to wait until Cm or even Dm to observe them (when this happens, they usually fall very early). So then, the proposal for Ad. 12 is: “The shape of catkins should be observed between Bm and Cm stages.”*  *TWF: to read “The shape of fully developed catkins should be observed between Bm and Cm stages.” and Char. 12 to read “Catkins: shape of fully developed catkins”* |
| Ad. 13 | relative width scale is upside down (invert “narrow” and “broad”)  *TWF: agreed* |
| Ad. 15 | to add “Observation should be made facing the suture.”  *TWF: agreed* |
| Ads. 16, 17, 18 | to read “Time of … is reached when …”  *TWF: agreed* |
| Ad. 19 | to be deleted  *TWF: agreed* |
| Ad. 20 | to read “Time of … is reached when …”  *TWF: agreed* |
| 8.3 | clarification needed on growth stages (age of trees for observation, does not correspond to growth stages) (to check whether they are needed, information covered in 3.1.3?)  *Leading Expert:*  *Point 3.1.3 only refers to the fruit and the expert considers that it is necessary to indicate when to begin to look at a characteristic to be representative. The age of flowering is very variable between varieties so, the expert consider it is good to indicate it.*  *But as it is difficult to homogenize the intervals, if needed, Point 8.3 could be removed.*  *In the English version of the guidelines should say only “Phenological stages”.*  *Point 8.3.3.in the English “and” should be said “or”.*  *TC-EDC/Oct18: to check whether growth stages (1), (2), (3) to be moved to Chapter 8.1 (no growth stages, time of observation) and to clarify when observations are made*  *Leading Expert:*  *- to include in point 8.1 (c) “always in full flowering of the second year, both masculine and feminin”, this way it could be reduced to 1 and 2.*  *- 8.1 (d) should also include that the minimum number of fruits to be onserved is 25 per tree, per year.*  *TWF:*  *- 8.1 (c) to read: “Observations on flowers should be made during full flowering period, both on male and female flowers”*  *- 8.3 (1)(2)(3) to be deleted*  *- Chapter 8.3 to be named “phenological stages”*  *- to indicate phenological stages in the table of characteristics (replacing growth stages) and delete reference to phenological stages from individual explanations in 8.2* |

The TWF further agreed that, due the complexity of the changes particularly in relation to Chapter 8.3 and the phenological stages, a new full draft of the Test Guidelines for Black Walnut be prepared for the consideration by the TC-EDC at its meeting in March 2019.

## Discussion on draft Test Guidelines

### Almond (Prunus amygdalus Batsch) (Partial revision)

The subgroup discussed document TWF/49/4, presented by Ms. Nuria Urquía Fernández (Spain), and agreed the following:

|  |  |
| --- | --- |
| Char. 43 | to correct spelling of example variety “Nec Plus Ultra” in state 4 |

### Apple (fruit varieties) (Revision) (Malus domestica Borkh.)

The subgroup discussed document TG/14/10(proj.1), presented by Mr. Erik Schulte (Germany), and received a presentation by the leading expert on the discriminating power of existing characteristics. The subgroup agreed the following:

|  |  |
| --- | --- |
| Table of Chars. | to review example varieties and to include intermediate states where example varieties are available |
| Char. 1 | to check whether to include measurements |
| Char. 3 | - to read “Only varieties with Tree type: ramified: Tree: habit”  - to add new state “upright to spreading” after state 1  - to update illustration with new state |
| Char. 4 | to be deleted |
| Chars. 8, 9 | to check correlation between these two characteristics |
| Char. 8 | to delete MG |
| Char. 9 | - to check whether to be deleted  - if kept, to have states from “absent to very weak (1) to very strong (9)” |
| Char. 11 | to have states “upwards (1), outwards (2), downwards (3)” |
| Char. 14 | to have states “low” to “high” |
| Char. 15 | to have notes 1, 3, 5 |
| Char. 16 | to have states from “weak” to “strong” |
| Char. 17 | to add (\*) |
| Char. 18 | to add (d) |
| Char. 19 | to be deleted |
| Chars. 20, 21 | to add illustrations |
| Char. 23 | to have states “thin (1), medium (2), thick (3)” |
| Chars. 24, 31 | to check wording of “extend” (extension, area?) |
| Char. 25 | to read “Stipule: length” with states from “very short (1) to very long (5)” |
| Char. 26 | to delete “predominant” |
| Char. 27 | to move “with petals pressed into horizontal position” as explanation to Chapter 8.2 |
| Char. 28 | to have states “below (1), same level (2), above (3)” |
| Char. 30 | to delete state “irregular” |
| Char. 31 | to be indicated as MG/VG |
| Char. 32, 33, 34, 35 | to be indicated as MG/MS/VG |
| Char. 35 | to have states from “very low (1) to very high (9)” |
| Char. 36 | to review shapes |
| Char. 37 | to add example varieties |
| Char. 39 | to have states “absent or weak (1), medium (2), strong (3)” |
| Char. 40 | - to check whether to be deleted or whether to replace with “Fruit: type of eye” with states “closed (1), partially open (2), fully open (2) or whether to include it as new char. before Char. 40 |
| Chars. 41, 42 | to be deleted |
| Char. 43 | to check whether to be deleted |
| Chars. 44, 45, 46, 47 | to be indicated as MS/VG |
| Chr. 48 | - to check whether to split in two or three characteristics (e.g. “Fruit: pattern of over color” with states “variegated, stained, solid” and “Fruit: stripes” with states “absent or very few to very many”)  - to add explanation |
| Char. 49 | to add illustration |
| Char. 50, 51, 52 | to check whether to reduce scale to have states “absent or small (1), medium (2), large (3)” |
| Chars. 53, 54, 55 | to add explanation |
| Chars. 56, 58 | to be deleted |
| Chars. 59, 60 | to provide further explanation |
| Char. 62 | to be deleted |
| Char. 63 | to add explanation |
| Chars. 65, 66 | - to add example varieties  - to add explanation |
| Char. 67 | - state 2 to read “yellowish white” instead of “cream”  - to check whether to add more colors for pinkish and reddish to be included  - to check whether to add explanation  - to check whether to be split in two or more characteristics  - also see correlation with Char. 68  - to be added to 5.3 as grouping characteristic |
| Char. 68 | to check whether to replace “amount” with “distribution” |
| Char. 69 | - to add explanation on how and when to be observed  - to correct spelling of “oxidation” |
| Char. 70 | to be deleted |
| Char. 72 | - to check whether to be deleted (see correlation with Char. 73)¨  - to provide additional information |
| Ad. 29 | - to improve illustration  - to read “Observations should be made just after petal drop.” |
| Ad. 35 | to be improved |

### Apricot (Prunus armeniaca L.) (Revision)

The subgroup discussed document TG/70/5(proj.2), presented by Mr. Chris Barnaby (New Zealand), on behalf of the Leading Expert, Mr. Hennie Venter (South Africa), and agreed the following:

|  |  |
| --- | --- |
| Cover page | to delete synonym for botanical name |
| 1. | to delete second paragraph (information provided in SW in Chapter 4.2) |
| 3.3.2 | to check whether applicable |
| Table of Chars. | - to check example varieties and synonyms and have only one name in for the same variety in the table of characteristics (see also Chapter 8.3)  - to check whether to present full scale in characteristics if example varieties for intermediate states are available |
| Char. 3 | - to check wording of characteristic (density of branching, number of branches?; see also wording of Ad. 3)  - to check whether to split in two characteristics (degree and density)  - to check whether to read “Tree: branching” |
| Char. 5 | to check whether to add example variety for state 1 (“Ander Pert”?) |
| Char. 11 | - to check example variety for state 9 (“Ninja” is state 7 “dark”)  - to check whether to have 5 instead of 9 notes |
| Char. 15 | to check whether both states “bicrenate” and “bidentate” are needed; difference unclear |
| Char. 16 | - to check whether to have 5 instead of 9 notes  - to check whether to add example variety “Mikado” for state 1 “very weak” |
| Char. 18 | to be indicated as MG/VG |
| Char. 19 | to check whether to add example varieties “Monaco Bella” and “Monique” for state 7 |
| Char. 26 | to check whether to add example variety “Rubilis” for state 1 |
| Char. 28 | to check whether “outwards” is needed (if not, would QL be appropriate?) |
| Char. 29 | - to check whether to be indicated as VG only and add explanation that overall size is assessed  - if MG should be added, to add explanation on how measurements are made |
| Char. 30 | to be indicated as VG only |
| Chars. 32, 33, 34 | to check whether to be indicated as MG/MS/VG |
| Char. 37 | state 3 to read “strongly depressed” |
| Char. 40 | to add new state 4 of expression “retuse” with example variety “Flash Cot” |
| Char. 41 | to add illustration |
| Char. 45 | to check whether also to be observed with pubescence present |
| Ads. 5, 6, 27, 46, 51 | to delete photographs (no illustrations for color) |
| Ad. 15 | to add explanation that observations should be made on the apical part of the leaf |
| Ad. 24 | to be deleted (see (c)) |
| Ad. 59 | to check whether to delete the last sentence |
| 8.3 | to be updated (see also comment on table of characteristics) |
| TQ5 | to complete full scale of state of expression |

### Argania (Argania spinosa (L.) Skeels)

The subgroup discussed document TG/ARGAN(proj.3), presented by Ms. Ibtihaj Belmehdi (Morocco), and agreed the following:

|  |  |
| --- | --- |
| Table of Chars. | - to add example varieties  - to check methods of observation (MS or MG?)  - to add illustrations |
| Char. 3 | - to add illustration  - to useful characteristic (can it be observed clearly on younger trees?) |
| Char. 6 | to be deleted |
| Char. 7 | to add (\*) |
| Char. 8 | to add illustration |
| Char. 9 | - to read “Tree: density of foliage”  - to be moved after char. 3 |
| Char. 11 | to read “Leaf blade: intensity of green color of upper side” with states “light, medium, dark” |
| Char. 12 | - to have states “elliptic, oblong, obovate”  - to add (\*) |
| Char. 19 | to read “Inflorescence distribution”  state 1 to read “in leaf axils only”  state 2 to read “on shoot internode only”  state 3 to read “in leaf axils and on internode shoots” |
| Char. 20 | to be deleted |
| Char. 21 | to read “Petal: color”  state 3 to read “dark yellow” |
| Char. 23 | to have states “circular (1), elliptic (2), ovate (3), fusiform (4)” |
| Char. 32 | to add explanation |
| Char. 33 | to be deleted |
| Char. 34 | - to read “Stone: thickness of shell”  - to be moved after Char. 31 |
| Char. 37 | to have notes 3, 5, 7 and states “narrow, medium, broad” |
| Char. 41 | to read “dark yellow” |
| Char. 42 | to be deleted |
| Char. 44 | to add explanation |

### \*Blueberry (Revision)

The subgroup discussed document TG/137/5(proj.4), presented by Mr. Nik Hulse (Australia), and agreed the following:

|  |  |
| --- | --- |
| Table of Chars. | to add indication (H) or (L) as follows: DrisBlueFifteen (H), Geerdens (H), Hele (H), EB 12-19 (L), Farthing (L), Ridley (L), Velluto Blue (H), Victoria (L), Ridley 1607 and 1403 (L), Freda (H)  - to delete example varieties without any (H) or (L) indication (e.g.Chickadee)  - “Flicker” to be replaced with “FL 96-43 (L)” |
| 4.2 | to add new ASW as 4.2.2 |
| 4.2.2 | first sentence to read “For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied.” |
| Char. 1 | - to have the following states and example vaerieties “weak (1) - Dolce Blue (L), medium (2) – DrisBlueSeven (L), strong (3) – Bluecrop (H), very Strong (4) – Vernon (L)” |
| Chars. 5, 6 and 7 | to be indicated as MG/VG |
| Char. 9 | to be deleted |
| Char. 12 | to be deleted |
| Char. 14 | to add example varieties “Cipria (L)”, “Hortblue Poppins (H)”, “Palmetto (L)” for state 1 |
| Char. 23 | to delete example variety “Sweetcrisp (L)” |
| Char. 26 | to be deleted |
| Char. 27 | to read “Fruit: type of sepals” |
| Char. 32 | to add example varieties “Elliott (H), Hortblue Poppins (H)” for state 1 |
| Char. 38 | to read “Time of beginning of flowering on current season’s shoot” |
| Char. 40 | to read “Time of beginning of fruit ripening on current season’s shoot” |
| Char. 42 | to be moved after Char. 17  to add example varieties “Bluetta (H)” for state 1, “Blueray (H)” for state 2, “Berkeley (H)” for state 3 and “FL 96-43 (L)”, “Tifblue (L)” for state 4 |
| 8.1 | to correct order of labels ((e) missing) |
| 8.1 (c) | to read “Observations on the inflorescence and flower should be made at the beginning of fruit fall” |
| Ad. 16 | to replace drawings with photographs or illustrations |
| Ads. 19, 22 | to add full stop at end of sentence |
| Ad. 19 | to add illustration in cross section and where to be observed |
| 9. | to add “Rejman, A., 1994: Pomologia. PWRiL, Warszawa, PL.” |
| TQ 7.3.1 | to delete options to select of low/mid/high chilling and only keep first sentence |

### Coconut (Cocos nucifera L.) (Partial revision)

The subgroup discussed document TWF/49/5, presented by Ms. Stefania Araujo (Brazil), and agreed with the proposed changes.

### Grapevine (Vitis L.) (Revision)

The subgroup discussed document TG/50/10(proj.1), presented by Mr. Massimo Gardiman (Italy), on behalf of the Leading Expert, Mr. Luca Aggio (Italy) and agreed the following:

|  |  |
| --- | --- |
| 3.1.3 | to read “In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles, except for rootstock varieties.” |
| 6.5 | to be completed as currently adopted version |
| Table of Chars. | - to add codes as in previously adopted version  - to check and review example varieties and use correct names instead of commercial names) |
| Char. 6 | to replace “copper” and “wine red” with appropriate color (see TGP/14) |
| Chars. 10, 11, 12, 13 | to be indicated as PQ |
| Char. 14 | to read “Shoot: density of erect hairs on internodes” |
| Char. 15 | to be deleted |
| Char. 21 | state “absent” to have note 9 |
| Char. 23 | to check whether to add “Rondinella” as example variety for state 7 |
| Char. 27 | to add example variety for state 9 |
| Char. 33 | to check whether to be deleted |
| Char. 35 | to check whether to split in two characteristics for length and width or to have ratio width/length characteristic |
| Char. 39 | to review wording of states of expression according to TGP/14 and update illustration accordingly |
| Char. 40 | - to check whether to delete states 1, 3, 4 and update example varieties  - to check whether to add characteristic on distribution of color |
| Char. 41 | to be deleted |
| Char. 42 | to check whether to delete or to reword and add explanation |
| Char. 44 | to check whether to reword and add explanation |
| Char. 45 | to add more classes of flavor |
| Char. 46 | to check whether to split in two characteristics (number of seeds) |

### Kiwifruit (Actinidia Lindl.) (Partial revision)

The subgroup discussed document TWF/49/6, presented by Mr. Chris Barnaby (New Zealand), and agreed the following:

|  |  |
| --- | --- |
| Chars. 18, 49 | to delete MS |
| Char. 29 | to read “Petiole: density of pubescence” and have the following states and example varieties “absent or sparse (1) - Sparkler, Hayward, Hort 16A, medium (2) - Russell, Meris, dense (3) - Meteor, Minkigold” |
| Ad. 25 | to read “The observation on the lower side of the leaf is an overall visual impression. The observation includes hairs and leaf surface.” |

*\*Macadamia (*Macadamia integrifolia *Maiden et Betche,* Macadamia tetraphylla *L.A.S. Johnson) (Revision)*

The subgroup discussed document TG/111/4(proj.4), presented by Mr. Nik Hulse (Australia), and agreed the following:

|  |  |
| --- | --- |
| 1. | to read “Betche” (see cover page) |
| 3.4 | to spell plants with a small p |
| 5.3 | to add Char. 18 |
| Char. 1 | to add example variety “EMB-1” for state 1 |
| Char. 9 | to add example variety “849” for state 3 |
| Char.13 | to be indicated as PQ |
| Char. 15 | to add example varieties “816” for state 1, “A16” for state 2, “333, A4” for state 3 |
| Char. 16 | - to delete example variety “MRG-20” and add “EMB-1” to state 3  - to add example variety “Daddow” to state 4 |
| Char. 17 | to add example varieties “A203” for state 1, “A38” for state 2, “Own Venture” for state 3 |
| Char. 18 | - to add example variety “MRG-20” for state 1  - to delete “MRG-20” and add example variety “EMB-1” for state 3  - to delete “EMB-1” from state 5 |
| Char. 19 | - state 1 to read “green” with example varieties “EMB-1, KRG-15, MRG-20, 816, A16, 849”  - to delete state 2 and 3  - to add example variety “KMB-5” for state “brown” |
| Char. 20 | to read “Leaf blade: intensity of color on upper side” |
| Char. 21 | to add example varieties “Own Choice” for state 3, “H2” for state 5, “A4” for state 7 |
| Char. 22 | - to add explanation  - to add example variety “A16” for state 3 |
| Char. 23 | to be deleted |
| Char. 25 | to replace (b) with (a) |
| Char. 28 | to add example varieties “H2” for state 1, “333” for state 2, “246” for state 3 |
| Char. 29 | to delete example variety “KMB-3” from state 3 |
| Char. 30 | to move example variety “KRG-15” from state 1 to state 2 |
| Char. 31 | to add example varieties “A16” for state 3 and “333” for state 7 |
| Char. 32 | to add example variety “KRG-15” to state 2 |
| Char. 36 | to add example varieties “660” for state 3, “738” for state 5, “A4” for state 7 |
| Char. 37 | to add example varieties “Own Venture” for state 3, “A4” for state 5, “660” for state 7 |
| TQ 5 | to complete full scale of state of expression |

## Survey on approaches for obtaining plant material from breeders and on deciding on varieties whose existence is a matter of common knowledge

The TWF considered document [TWP/2/13](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47208&doc_id=406179) and noted the results of the survey on the approaches used by members of the Union for obtaining plant material from breeders and on deciding on varieties whose existence is a matter of common knowledge.

The TWF noted that TC had noted that different approaches were used by UPOV members in establishing whether varieties were a matter of common knowledge and had recalled that document TGP/4 “Constitution and maintenance of variety collections” provided guidance on this matter.

The TWF agreed that obtaining plant material was a key requirement for DUS Examination.  The TWF agreed that it would be interesting to discuss further current challenges faced by DUS authorities in the fruit sector, to obtain plant material from different sources. It further agreed to continue the discussion under a specific agenda item for its next session, in order to identify the current difficulties to obtain plant material and the impact it could have on performing reliable DUS examinations. The TWF agreed that it would be a good way to explore possible improvement in cooperation between DUS Testing centers in exchanging information, data and/or plant material. The TWF invited the representatives of Canada, China, European Union, Italy and Spain to make a presentation at its next session on their situation in their respective country in relation to access to plant material for DUS examination.

Molecular Techniques

### (a) Developments in UPOV

The TWF considered document [TWP/2/7 Rev.](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47208&doc_id=406439) and noted the report on developments in the TWPs and BMT, as set out in paragraphs 6 to 37 of document TWP/2/7 Rev..

The TWF noted that the Office of the Union planned to invite members of the Union to provide sample database models currently in use as a basis to develop further guidance for document UPOV/INF/17 Section 6 “Databases”, including to assess whether the ST-26 standard would be suitable for UPOV purposes or whether a different model would need to be proposed.

The TWF considered document TGP/15/2 Draft 1 and the approach “Genetic selection of similar varieties for the first growing cycle: example French bean” presented in document TWP/2/7 Annex.

The TWF agreed with the BMT that the approach should be proposed for inclusion in document TGP/15 on the basis of a simplified version of draft text presented in document [TGP/15/2 Draft 1](http://upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=405417).

The TWF noted the developments in relation to international collaboration and encouraged further cooperation in relation to the use of molecular techniques at the international level.

The TWF noted the developments in relation to molecular techniques as presented at the TC, at its fifty fourth session (see document TC 54/31 “Report”, paragraphs 260 to 291).

### (b) Presentation on the use of molecular techniques in DUS examination

The TWF noted that no presentations had been received by the Office.

## Variety denominations

The TWF considered document [TWP/2/6](http://www.upov.int/meetings/en/doc_details.jsp?meeting_id=47208&doc_id=405835).

The TWF noted the developments concerning a possible revision of document UPOV/INF/12 “Explanatory Notes on Variety Denominations under the UPOV Convention”, as set out in paragraphs 6 to 10 of document TWP/2/6.

The TWF noted the developments concerning a UPOV similarity search tool for variety denomination purposes, as set out in paragraph 12 of document TWP/2/6.

The TWF noted developments concerning the possible expansion of the content of the PLUTO Database, as set out in paragraph 14 of document TWP/2/6.

The TWF noted developments concerning non acceptable terms, as set out in paragraph 16 of document TWP/2/6.

The TWF noted that the fifth meeting of the WG-DEN had been held in Geneva, on October 30, 2018.

The TWF noted the draft agenda of the fifth meeting of the WG-DEN, as set out in paragraph 18 of document TWP/2/6.

The TWF noted that new developments in relation to variety denominations would be reported at its next session.

## Information and databases

### (a) UPOV information databases

The TWF considered document [TWP/2/4](http://www.upov.int/edocs/mdocs/upov/en/twa_47/twp_2_4_rev.pdf) Rev..

#### GENIE database

The TWF noted that 440 new UPOV codes had been created in 2017 and a total of 8,589 UPOV codes were included in the GENIE database.

The TWF noted that European Commission Directorate General SANTE (DG SANTE) had proposed the establishment of an administrative arrangement between the Office of the Union and the European Commission to cover collaboration in scientific names of plant species present in each other’s databases and, in particular, regarding the attribution of UPOV codes to plant species in the Forest Reproductive Material Information System (FOREMATIS).

The TWF noted the invitation to submit comments on Annex V, part A “UPOV codes amendments to be checked”, part B “New UPOV codes or new information”, and part C “Crop type(s) of UPOV codes used in the PLUTO database for the first time” to the Office of the Union by March 31, 2019.

#### PLUTO database

The TWF noted the summary of contributions to the PLUTO database from 2014 to 2017 and the current situation of members of the Union on data contribution, as presented in the Annex IV to document TWP/2/4 Rev..

The TWF noted the conclusions of the TC at its fifty-fourth session in relation to amendments to UPOV Code (see see document TC 54/31 “Report”, paragraphs 296 to 302).

### (b) Variety description databases

The TWF considered document [TWP/2/2](https://www.upov.int/edocs/mdocs/upov/en/twa_47/twp_2_2.pdf) and noted the developments reported in this document.

### (c) Exchange and use of software and equipment

The TWF considered document [TWP/2/5](http://upov.int/meetings/en/doc_details.jsp?meeting_id=47206&doc_id=404877) .

#### Document UPOV/INF/16 “Exchangeable Software”

The TWF noted that the Council, at its fifty-first ordinary session, held in Geneva, on October 26, 2017, had adopted document UPOV/INF/16/7 “Exchangeable Software.

The TWF noted that the Office of the Union had issued circular E-18/042, inviting the designated persons of the members of the Union in the TC to provide or update information regarding the use of the software included in document UPOV/INF/16.

#### Document UPOV/INF/22 “Software and Equipment Used by Members of the Union”

The TWF noted the Council, at its fifty-first ordinary session, held in Geneva, on October 26, 2017, had adopted document UPOV/INF/22/4 “Software and equipment used by members of the Union”.

The TWF noted the Office of the Union had issued circular E-18/042, inviting the designated persons of the members of the Union in the TC to provide or update information for document UPOV/INF/22.

### (d) Electronic application systems

The TWF considered document [TWP/2/3](http://www.upov.int/edocs/mdocs/upov/en/twa_47/twp_2_3.pdf) and received a presentation by the Office of the Union on UPOV PRISMA, a copy of which would be provided as an Addendum to document TWP/2/3. The TWF noted the developments concerning UPOV PRISMA.

## Recommendations on draft Test Guidelines

### (a) Test Guidelines to be put forward for adoption by the Technical Committee

The TWF agreed that the following draft Test Guidelines should be submitted to the TC for adoption on the basis of the following documents and the comments in this report:

|  |  |
| --- | --- |
| Subject | Relevant document(s) |
| Almond (*Prunus amygdalus* Batsch)  (Partial revision: Characteristic 43) | TG/56/4, TWF/49/4 |
| \*Blueberry (*V. angustifolium* x *V. myrsinites* x *V. corymbosum, V. angustifolium* Aiton, Hybrids between *V. corymbosum* and *V. angustifolium*, *V. corymbosum* *x V. angustifolium* x *V. virgatum*, *V. corymbosum* L., *V. formosum* Andrews, *V. myrtilloides* Michx., *V. myrtillus* L., *V. simulatum* Small, *V. virgatum* Aiton) (Revision) | TG/137/5(proj.4) |
| Coconut (*Cocos nucifera* L.)  (Partial revision: example varieties of Chars. 5 and 11; Ad. 11) | TG/314/1, TWF/49/5 |
| Kiwifruit (*Actinidia* Lindl.)  (Partial revision: Characteristics 18, 25 and 49; addition of new char. after Char. 28 “Petiole: pubescence”) | TG/98/7, TWF/49/6 |
| \*Macadamia *(Macadamia integrifolia* Maiden et Betche, *Macadamia tetraphylla* L. Johns.) (Revision) | TG/111/4(proj.4) |

### (b) Test Guidelines to be discussed at the fiftieth session

The TWF agreed to discuss the following draft Test Guidelines at its fiftieth session:

|  |
| --- |
| Apple (fruit varieties) (Revision) (*Malus domestica* Borkh.) |
| \*Apricot (*Prunus armeniaca* L.) (Revision) |
| Argania (*Argania spinosa* (L.) Skeels) |
| Avocado (*Persea americana* Mill.) (Partial revision: addition of new stem characteristic) |
| Avocado Rootstocks (*Persea americana* Mill.; *Persea schiedeana* Nees) (Partial revision: Chapter 2) |
| Date Palm (*Phoenix dactylifera* ) |
| Grapevine (*Vitis* L.) (Revision) |
| Guava (*Psidium guajava* L.) (Revision) |
| Goji (*Lycium* L.) |
| Mulberry (*Morus* L.) |
| Oranges (*Citrus* L. - Group 2) (Partial revision: Characteristics 26, 56, 64, 81, 83) |
| \*Physic Nut (*Jatropha curcas* L.) |
| Pistachio (*Pistacia* L.) |
| Pummelo (Grapefruit and) (*Citrus* L. - Group 4) (Partial revision: Characteristics 30, 50, 63, 65, 66, 81) |
| Strawberry (*Fragaria* L.) (Revision) |
| Sweet Cherry (*Prunus avium* L.) (Revision) |

The leading experts, interested experts and timetables for the development of the Test Guidelines are set out in Annex VIII to this report.

### (c) Possible Test Guidelines to be discussed in 2020

A list of Test Guidelines the TWF agreed to possibly discuss at its session in 2020 is presented in Annex VIII to this report.

## Date and place of the next session

At a co-invitation of Hungary and the European Union, the TWF agreed to hold its fiftieth session in Budapest, Hungary, from June 24 to 28, 2019.

Future program

The TWF proposed to discuss the following items at its next session:

1. Opening of the Session

2. Adoption of the agenda

3. Short reports on developments in plant variety protection

(a) Reports from members and observers (written reports to be prepared by members and observers

(b) Reports on developments within UPOV (oral report by the Office of the Union)

4. Molecular Techniques (document to be prepared by the Office of the Union)

5. TGP documents (documents to be prepared by the Office of the Union)

6. Variety denominations (document to be prepared by the Office of the Union)

7. Information and databases

(a) UPOV information databases (documents to be prepared by the Office of the Union)

(b) Variety description databases (documents to be prepared by the Office of the Union)

(c) Exchange and use of software and equipment (document to be prepared by the Office of the Union)

(d) UPOV PRISMA (document to be prepared by the Office of the Union)

8. Experiences with new types and species (oral reports invited)

9. Access to plant material for the purpose of management of variety collections and DUS examination (presentations to be prepared by Canada, China, European Union, Italy and Spain)

10. DUS examination of mutant varieties of apple (document to be prepared by the European Union)

11. Matters relevant in DUS examination for the fruit sector (presentations invited from members and observers)

12. Guidance for drafters of Test Guidelines

13. Matters to be resolved concerning Test Guidelines put forward for adoption by the Technical Committee

14. Discussion on draft Test Guidelines (Subgroups)

15. Recommendations on draft Test Guidelines

16. Date and place of the next session

17. Future program

18. Adoption of the Report of the session (if time permits)

19. Closing of the session

Visit

On November 21, 2018, the TWF received presentations from Mr. Manuel Toro Ugalde, Head of Department, Protection of New Varieties of Plants, *Servicio Agrícola y Ganadero* (SAG), Ministry of Agriculture, Mr. Mario Schindler, Executive Director, Chilean Seed Association (ANPROS), Mr. Sergio Maureira Baeza, Secretary-General, Fruit export Association (ASOEX), and Mr. Rodrigo Cruzat González, Head of the “*Consorcio de Biofrutales S.A*”. A copy of their presentations is reproduced in Annex III, IV, V, VI, respectively, to this document.

During the afternoon of November 21, 2018, the TWF visited the experimental research center of “Universidad de Chile”. The TWF was welcomed by Mr. Rodrigo Cruzat González and visited the breeding program for nectarine, peach, plum and almond. The TWF also visited the research station of “*Universidad Católica de Chile*”. The TWF was welcomed by Ms. Marlene Ayala, Researcher and Professor of *Pontificia Universidad Católica de Chile*, Technical Director of the Cherry Breeding Program of “*Consorcio Tecnológico de la Fruta*”, and received a presentation on the activities of ASOEX and their breeding program, a copy of which is provided in Annex VII to this document. The TWF also heard from Ms. Marlene Ayala, that obtaining plant material from other breeders as a basis for her breeding program was an issue. The TWF received a guided tour of the sweet cherry orchards of different selection stages of breeding programs by Ms. Maria Fernanda Alvarez, R&D coordinator.

The TWF adopted this report at the end of the session.

[Annexes follow]

TWF/49/12

ANNEXES I to VII

[Annexes I to VII only available in the pdf version of this report]

[Annex VIII follows]

LIST OF LEADING EXPERTS

**DRAFT TEST GUIDELINES TO BE SUBMITTED  
TO THE TECHNICAL COMMITTEE IN 2019**

All requested information to be submitted to the Office of the Union

**by January 4, 2019**

| Species | Basic Document(s) | Leading expert(s) |
| --- | --- | --- |
| Almond (*Prunus amygdalus* Batsch) (Partial revision: Characteristic 43) | TG/56/4, TWF/49/4 | Ms. Nuria Urquía Fernández (ES) |
| \*Blueberry (*V. angustifolium* x *V. myrsinites* x *V. corymbosum, V. angustifolium* Aiton, Hybrids between *V. corymbosum* and *V. angustifolium*, *V. corymbosum* *x V. angustifolium* x *V. virgatum*, *V. corymbosum* L., *V. formosum* Andrews, *V. myrtilloides* Michx., *V. myrtillus* L., *V. simulatum* Small, *V. virgatum* Aiton) (Revision) | TG/137/5(proj.4) | Mr. Nik Hulse (AU) |
| Coconut (*Cocos nucifera* L.)  (Partial revision: example varieties of Chars. 5 and 11; Ad. 11) | TG/314/1, TWF/49/5 | Ms. Stefânia Palma Araujo (BR) |
| Kiwifruit (*Actinidia* Lindl.)  (Partial revision: Characteristics 18, 25 and 49; addition of new char. after Char. 28 “Petiole: pubescence”) | TG/98/7, TWF/49/6 | Mr. Chris Barnaby (NZ) |
| \*Macadamia *(Macadamia integrifolia* Maiden et Betche, *Macadamia tetraphylla* L. Johns.) (Revision) | TG/111/4(proj.4) | Mr. Nik Hulse (AU) |

**DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWF/50**

(\* indicates possible final draft Test Guidelines)

**(Guideline date for Subgroup draft to be circulated by Leading Expert: March 15, 2019**

**Guideline date for comments to Leading Expert by Subgroup: April 12, 2019)**

New draft to be submitted to the Office of the Union

**May 10, 2019**

| Species | Basic Document(s) | Leading expert(s) | Interested experts (States/Organizations) [[1]](#footnote-2) |
| --- | --- | --- | --- |
| Apple (fruit varieties) (Revision) (*Malus domestica* Borkh.) | TG/14/10(proj.1) | Mr. Erik Schulte (DE) | AU, BR, CA, CL, CN, CZ, FR, HU, JP, KR, MX, NL, NZ, PL, QZ, RU, ZA, CIOPORA, Office |
| \*Apricot (*Prunus armeniaca* L.) (Revision) | TG/70/5(proj.2) | Mr. Hennie Venter (ZA) | AU, BG, CN, CZ, ES, FR, HU, IL, IT, JP, KR, MA, NZ, PL, QZ, RO, CIOPORA, Office |
| Argania (*Argania spinosa* (L.) Skeels) | TG/ARGAN(proj.3) | Ms. Ibtihaj Belmehdi (MA) | IL, Office |
| Avocado (*Persea americana* Mill.) (Partial revision: addition of new stem characteristic) | TG/97/4 | Mr. Ephraim Wachira (KE) | AU, ES, JP, MX, NZ, QZ, Office |
| Avocado Rootstocks (*Persea americana* Mill.; *Persea schiedeana* Nees)  (Partial revision: Chapter 2) | TG/318/1 Corr. | Ms. Nuria Urquía Fernández (ES) | AU, JP, KE, MX, NZ, QZ, Office |
| Date Palm (*Phoenix dactylifera* ) | TG/PHOEN\_DAC (proj.1) | Mr. Rashid Al-Yahyai (OM) | BR, IL, MA, MX, TN, Office |
| Grapevine (*Vitis* L.) (Revision) | TG/50/10(proj.1) | Mr. Luca Aggio (IT) | AU, BR, CA, CL, CN, CZ, DE, ES, FR, HU, JP, KR, MX, NZ, QZ, RU, ZA, CIOPORA, Office |
| Guava (*Psidium guajava* L.) (Revision) | TG/110/3 | Ms. Ling Gao (CN) | BR, MX, QZ, Office |
| Goji (*Lycium* L.) | NEW | Ms. Chuanhong Zhang (CN) | DE, KR, QZ, Office |
| Mulberry (*Morus* L.) | NEW | Mr. Yosuke Abe (JP) | BR, CN, IT, KR, QZ, Office |
| Oranges (*Citrus* L. - Group 2) (Partial revision: Characteristics 26, 56, 64, 81, 83) | TG/202/1 Rev. | Ms. Nuria Urquía Fernández (ES) | BR, FR, JP, MO, NZ, QZ, CIOPORA, Office |
| \*Physic Nut (*Jatropha curcas* L.) | TG/JATRO\_CUR (proj.2) | Mr. Alejandro Barrientos‑Priego (MX) | BR, IL, QZ, Office |
| Pistachio (*Pistacia* L.) | TG/PISTA(proj.2) | Ms. Urszula Braun-Mlodecka (QZ) | AU, ES, IT, KE, MX, ZA, Office |
| Pummelo (Grapefruit and) (*Citrus* L. - Group 4)  (Partial revision: Characteristics 30, 50, 63, 65, 66, 81) | TG/204/1 Rev. | Ms. Nuria Urquía Fernández (ES) | BR, FR, JP, MO, NZ, QZ, CIOPORA, Office |
| Strawberry (*Fragaria* L.) (Revision) | TG/22/10 Rev. | Mr. Erik Schulte (DE) | AU, CA, CL, ES, JP, KR, MO, NZ, PL, PT, QZ, CIOPORA, Office |
| Sweet Cherry (*Prunus avium* L.) (Revision) | TG/35/7 | Ms. Carole Dirwimmer (FR) | AU, BG, CA, CZ, ES, HU, IT, JP, KR, NZ, PL, QZ, RO, SK, ZA, CIOPORA, Office |

**POSSIBLE TEST GUIDELINES TO BE DISCUSSED IN 2020**

|  |  |
| --- | --- |
| Species | Basic Document(s) |
| Carambola (*Averrhoa carambola* L.) | NEW |
| Sour Cherry (*Prunus cerasus* L.); Duke Cherry (*Prunus* *×gondouinii* (Poit. & Turpin) Rehder) (Revision) | TG/230/1 |

[End of Annex VIII and of document]

1. for name of experts, see List of Participants [↑](#footnote-ref-2)