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

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| Technical Working Party for Ornamental Plants and Forest Trees  Fifty-Fourth Session Hanover, Germany, June 13 to 17, 2022 | TWO/54/6  Original: English  Date: June 17, 2022 |

report

adopted by the Technical Working Party for Ornamental Plants and Forest Trees

Disclaimer: this document does not represent UPOV policies or guidance

Opening of the session

The Technical Working Party for Ornamental Plants and Forest Trees (TWO) held its fifty-fourth session, hosted by Germany and organized by electronic means, from June 13 to 17, 2022.  The list of participants is reproduced in Annex I to this report.

The session was opened by Ms. Ashley Balchin (Canada), Chairperson of the TWO, who welcomed the participants.

The TWO was welcomed by Mr. Elmar Pfülb, President, Bundessortenamt, and received a presentation on the history of variety testing in Germany, the tasks and responsibilities of Bundessortenamt. A copy of the presentation is provided in Annex II to this report.

The TWO received a presentation on DUS testing of ornamental crops and forest trees at the Bundessortenamt from Ms. Andrea Menne, Head of Section, DUS Testing Ornamentals, Bundessortenamt. A copy of the presentation is provided in Annex III to this report.

## Adoption of the agenda

The TWO adopted the agenda as reproduced in document TWO/54/1 Rev.

Short Reports on Developments in Plant Variety Protection

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

The TWO noted the information on developments in plant variety protection from members and observers that was provided in document TWO/54/3 Prov. The TWO noted that reports submitted to the Office of the Union after June 7, 2022, would be included in the final version of document TWO/54/3.

### (b) Reports on developments within UPOV

The TWO received a presentation from the Office of the Union on latest developments within UPOV, a copy of which is provided in document TWO/54/2.

## Increasing participation in the work of the Technical Working Parties and the Technical Committee

The TWO considered document TWP/6/12.

### Participation at TWP meetings by electronic means

The TWO noted the participation at the TWP sessions in 2021, as presented in document TWP/6/12, Annex I.

### Measures for physical and virtual participation at TWP meetings

The TWO noted the measures agreed by the TC for physical and virtual participation at TWP meetings, as set out in document TWP/6/12, paragraphs 9 to 12.

The TWO noted that comments received in advance of the session were included in the discussions on the respective agenda item during the session. The TWO agreed to propose that contributors providing comments be invited to take the floor to present their comments. The TWO agreed that active participation in virtual meetings should be encouraged to increase the number of members providing views during the meetings.

The TWO noted that the Office of the Union would interview members and observers and report outcomes to the TC, at its fifty-eighth session, along with options for improving the support provided by UPOV for DUS examination.

## Cooperation in examination

The TWO considered document TWP/6/9.

The TWO noted that members of the Union had the possibility to update information on a person(s) to be contacted for matters concerning international cooperation in DUS examination by:

(i) updating information when invited to provide information for document TC/[xx]/4 “List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability”; and/or

(ii) notifying the Office of the Union by sending an e-mail to: upov.mail@upov.int

The TWO noted the development of a package of compatible IT tools to address the technical and related administrative concerns that prevent cooperation in DUS examination, as reported in document TWP/6/9, paragraphs 9 to 14.

The TWO noted that a presentation on e-PVP Asia would be made to the TWPs, at their sessions in 2022.

The TWO noted that the development of a platform for UPOV member databases containing variety description information would depend on UPOV members indicating which databases they would wish to share.

The TWO noted that the use of machine translation technology would be considered within a review of UPOV’s policy on translation.

The TWO noted that the CAJ, at its seventy-eighth session:

(i) had agreed to include possible “guidance to encourage members of the Union, on a voluntary basis, to take over DUS test reports when the applicants could not submit plant material due to phytosanitary or other related issues where acceptable to the members of the Union concerned” as part of the work to be agreed by the CAJ; and

(ii) agreed measures to address policy or legal barriers that the TC had identified as preventing international cooperation in DUS examination, as set out in document TWP/6/9, paragraph 34.

The TWO noted that the impact of the proposed measures would be assessed on the basis of the number of cooperation agreements reported by members of the Union, as presented in document C/[xx]/INF/5 “Cooperation in examination”.

## Development of guidance and information materials

The TWO considered document TWP/6/1.

### Matters for consideration by the Technical Working Parties

#### Document UPOV/INF/23 “UPOV Code System”

The TWO agreed to revise document UPOV/INF/23 “Guide to the UPOV Code System” as set out in document TWP/6/1, paragraph 13.

#### Document TGP/7 “Development of Test Guidelines”

##### Example varieties for asterisked quantitative characteristics when illustrations are provided

The TWO agreed to propose amending document TGP/7 to remove the requirement to provide example varieties for asterisked quantitative and pseudo‑qualitative characteristics if illustrations are provided, to read as follows:

"(iii) If a characteristic is important for the international harmonization of variety descriptions (asterisked characteristics) ~~and~~ , is influenced by the environment and cannot be illustrated by photographs or drawings in a meaningful way ~~(most quantitative and pseudo-qualitative characteristics)~~ ~~or example varieties are necessary for illustration of the characteristic (see Section 3.1)~~ it is necessary to provide example varieties.

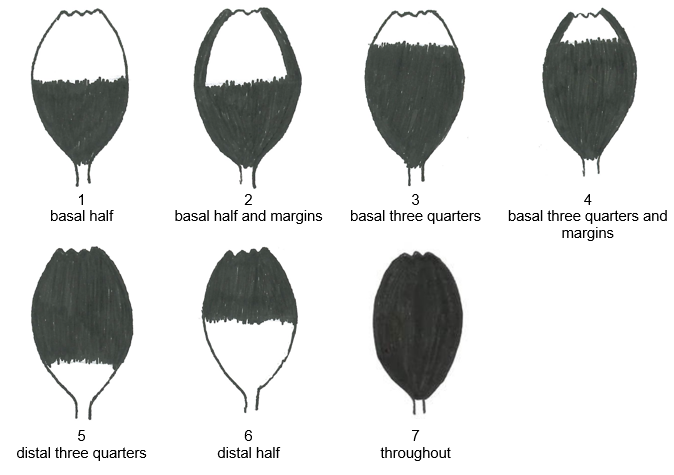
“In species where the range of expression is high at the variety level for a quantitative characteristic (which cannot be measured), it would not be appropriate to illustrate the states of expression exclusively with a drawing or photograph. In these cases, example varieties would be required.”

The TWO noted that Test Guidelines for ornamental plants included many quantitative and pseudo‑qualitative floral characteristics, which were not measured and only visually observed (VG). The TWO agreed that the use of illustrations would be suitable to replace example varieties for such characteristics and further facilitate international harmonization. The TWO agreed that the following characteristics could be used as examples of the approach to replace example varieties when illustrations were provided:

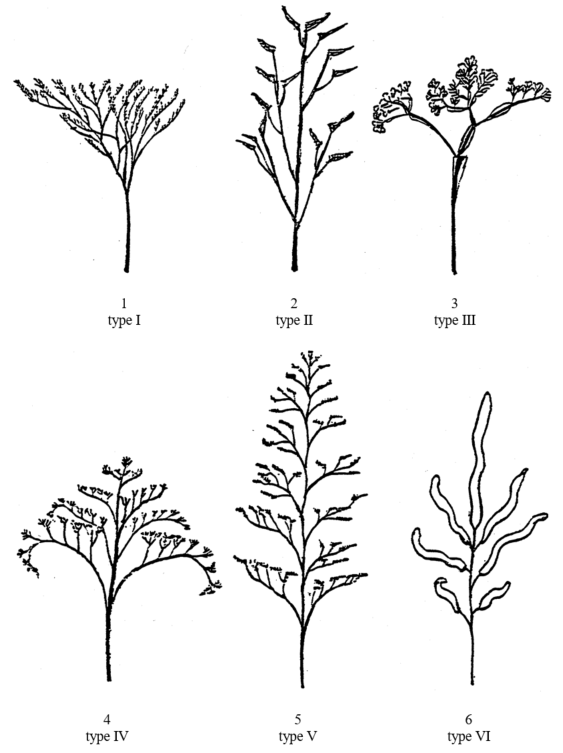
* Document TG/336/1 “Coreopsis”:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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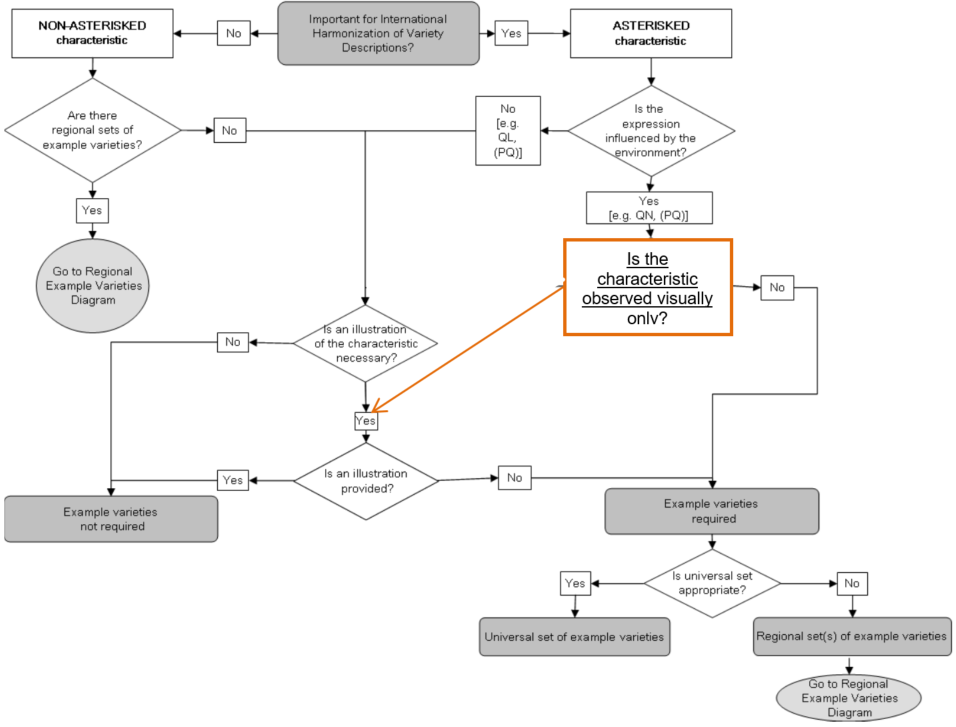
Ad. 29: Ray floret: distribution of main color (PQ)



* Document TG/168/3 “Statice”: Ad. 24: Inflorescence: type (PQ)



The TWO noted that the term “controlled environment” in Flow Diagram 1 of document TGP/7, GN 28, was not explained in the text of GN 28. The TWO agreed that the environment could not be fully controlled even under greenhouse conditions. The TWO agreed to propose that Flow Diagram 1 be amended to replace the question “is the environment controlled” by “is the characteristic observed visually only?”, as follows:



##### Indication of grouping characteristics in UPOV Test Guidelines (Table of characteristics and TQ 5)

The TWO considered the proposal to revise document TGP/7 “Development of Test Guidelines” to indicate characteristics in the table of characteristics and technical questionnaire used as grouping characteristics, as set out in document TWP/6/1, paragraph 22.

The TWO agreed with the TWA, at its fifty-first session, that no revision of document TGP/7 would be required as information on grouping characteristics was not relevant in the technical questionnaire and it would not be necessary to repeat information from Section 5 in the table of characteristics.

##### Converting standard wording in Test Guidelines into optional wording

The TWO agreed to amend document TGP/7 “Development of Test Guidelines” to convert the standard wording in the Test Guidelines template, paragraph 4.2.2, into additional standard wording (optional), as set out in document TWP/6/1, paragraph 25.

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

##### The Combined-Over-Years Uniformity Criterion (COYU)

The TWO considered document TWP/6/11.

The TWO noted that software for COYU Splines would be under evaluation and planned to be implemented in the United Kingdom from 2022.

The TWO noted that evaluation versions of software for COYU Splines had been made available in August 2021.

The TWO noted the invitation for members of the Union to participate in the test campaign of the COYU Splines software and report outcomes to the expert from the United Kingdom.

The TWO noted the request for the TWM to prepare a report of the results of the test campaign of the software for COYU Splines for consideration by the TC, at its fifty-eighth session, in conjunction with the revision of document TGP/8.

#### Document TGP/12 ‘Guidance on certain physiological characteristics’

##### Word “highly” in only one state of expression

The TWO noted the proposal to revise the states of expression in the example characteristic in document TGP/12/2, Section 2.3.2, to address the use of the word “highly” in only one state of expression.

The TWO noted that the proposal was restricted to the TWV and agreed to propose including all TWPs in discussions.

### Matters for information

The TWA noted the following matters for information presented in document TWP/6/1:

* The outcomes of discussion on a proposal to revise document TGP/5, Section 6 “UPOV Report on Technical Examination and UPOV Variety Description” to include additional information in DUS test reports and alternative approaches to enhance the use of existing DUS test reports, as presented in Annex VI;
* Discussions on a proposal for the addition of state of expression and placement of non-asterisked disease resistance characteristics in the Technical Questionnaire, Section 5, as presented in Annex VII;
* Matters for adoption by the Council in 2022, as presented in Annex VIII; and
* The program for the development of relevant guidance and information materials, as presented in Annexes IX and X.

## Disease resistance in ornamental crops

The TWO received a presentation on “Resistance to *Puccinia horiana* in Chrysanthemum - Progress report concerning a potential new DUS characteristic” by an expert from the Netherlands. A copy of the presentation is provided in document TWO/54/4. The TWO noted work reported and agreed to invite the expert from the Netherlands to report developments at its fifty-fifth session.

The TWO noted that resistance to *P. horiana* is a current breeding objective and that it was not yet used in DUS examination. The TWO noted the invitation for further participation in the development of the methodology to assess the characteristic.

The TWO noted the particular requirements for maintenance of the isolates of *P. horiana* and agreed that further consideration would be required before introducing such characteristic in the Test Guidelines for Chrysanthemum.

## Variety denominations

The TWO considered document TWP/6/6 and noted developments concerning the “Explanatory Notes on Variety Denominations under the UPOV Convention” (document UPOV/EXN/DEN/1), the possible development of a UPOV similarity search tool for variety denomination and the expansion of the content of the PLUTO database.

## Information and databases

### (a) UPOV information databases

The TWO considered document TWP/6/4.

#### GENIE database

The TWO noted that 131 new UPOV codes were created in 2021 and a total of 9,342 UPOV codes are included in the GENIE database.

#### Proposals for amending UPOV codes

The TWO noted the amendments agreed by the TC, at its fifty-seventh session, to the UPOV codes for *Beta vulgaris*, *Brassica oleracea*, *Citrus*, *Zea mays*, *Aloe aristata* and *Dicentra spectabilis* as set out in paragraphs 15 to 26 of document TWP/6/4.

The TWO noted that members of the Union and contributors of data to the PLUTO database would be informed of the changes to UPOV codes and the date of the changes by means of a circular in advance.

##### Proposed amendments for consideration by the TWF and TWO in 2022

The TWO agreed to delete the UPOV Codes HYLOC, HYLOC\_COS, HYLOC\_GUA, HYLOC\_GUN, HYLOC\_POL and HYLOC\_UND, as set out in document TWP/6/4, paragraph 34.

The TWO agreed to delete the UPOV Codes CALAT\_CRO, CALAT\_LOE, CALAT\_LRO, CALAT\_ROS and CALAT\_WAR, as set out in document TWP/6/2, paragraph 38.

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##### TWP checking

The TWO noted the invitation to check the amendments, new UPOV codes or information, and UPOV codes used in the PLUTO database for the first time, as reproduced in document TWP/6/4, Annex IV, and submit comments to the Office of the Union by December 31, 2022.

#### PLUTO database

The TWO noted the summary of data contributions from members of the Union to the PLUTO database from 2017 to 2021, as presented in document TWP/6/4, the Annex V.

### (b) Variety description databases

The TWO considered document TWP/6/2.

The TWO noted the reports made at the TWPs in 2021 on databases containing morphological and/or molecular data.

The TWO noted that members of the Union would be invited to report to the TWPs on work concerning the development of databases containing morphological and/or molecular data.

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

The TWO considered document TWP/6/5.

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

The TWO noted that the Council had adopted by correspondence, on September 21, 2021, document UPOV/INF/16/10 “Exchangeable Software”.

The TWO noted that the Office of the Union had issued on January 18, 2022, Circular E-22/002 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/16/11 Draft 1 “Exchangeable Software” to the Office of the Union by February 28, 2022.

The TWO noted that information from China, the Czech Republic, France, Poland and Uzbekistan had been received to update document UPOV/INF/16.

The TWO noted that the TWM, at its first session, would be invited to review the software proposed by China, Czech Republic, France, Poland and Uzbekistan and make a recommendation to the TC, at its fifty‑eighth session, on whether to include the proposed software in document UPOV/INF/16.

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

The TWO noted that the Council had adopted by correspondence, on September 21, 2021, document UPOV/INF/22/8 “Software and Equipment Used by Members of the Union”.

The TWO noted that the Office of the Union had issued on January 18, 2022, Circular E-22/002 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/22/9 Draft 1 “Use of software and equipment” to the Office of the Union by February 28, 2022.

The TWO noted that information from the Czech Republic, the Netherlands, Poland and Uzbekistan had been received to update document UPOV/INF/22.

The TWO noted that the TC, at its fifty-eighth session, would be invited to consider whether to include the proposed software or equipment in document UPOV/INF/22/9 Draft 1, or whether to request further guidance from other relevant bodies.

#### Availability of documents UPOV/INF/16 “Exchangeable Software” and UPOV/INF/22 “Software and Equipment Used by Members of the Union” in a searchable form

The TWO noted that the information in documents UPOV/INF/16 and UPOV/INF/22 was available in a searchable format on the UPOV website

### (d) UPOV PRISMA

The TWO considered document TWP/6/3 and noted the developments concerning UPOV PRISMA.

## Experiences with new types and species

The TWO received a report from an expert from the European Union on applications received for ornamental varieties of *Colocasia esculenta* (L.) Schott. The TWO noted that the Test Guidelines for Colocasia (document TG/255/1) was not developed for ornamental varieties and noted there was no experience among participants in DUS examination of the crop.

## Molecular techniques

The TWO considered document TWP/6/7.

### Session to facilitate cooperation in relation to the use of molecular techniques

The TWO noted that no reports were made on the use of biochemical and molecular techniques in DUS examination of ornamental plants.

### Cooperation between international organizations

The TWO noted that the results of the survey on the use of molecular marker techniques had been made available on the webpage of the fifty-seventh session of the Technical Committee, as set out in document TWP/6/7, paragraph 28.

The TWO noted that on February 1, 2022, the Office of the Union had issued Circular E-2/009 inviting members to continue the survey on the use of molecular marker techniques.

The TWO noted the draft joint document explaining the principal features of the systems of OECD, UPOV and ISTA, as set out in the Annex to document TWP/6/7.

The TWO noted the topics proposed by the TC for a future joint UPOV/OECD/ISTA workshop, as set out in document TWP/6/7, paragraph 35.

The TWO noted that on December 13, 2021, the Office of the Union had informed OECD and ISTA of the result of the survey, draft joint document and proposed topics for a future joint UPOV/OECD/ISTA workshop. Responses from OECD and ISTA, when available, would be reported to the Technical Working Parties and the Technical Committee.

### Developments at the twentieth session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular

The TWO noted the papers presented at the twentieth session of the BMT and the program of work for the first session of the TWM.

### Confidentiality & ownership of molecular information

The TWO noted discussions held at the TWPs and the BMT, at their sessions in 2021, on “Confidentiality & Ownership of Molecular Information”

### Review of document UPOV/INF/17 “Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction (‘BMT Guidelines’)”

The TWO noted that a revision of document UPOV/INF/17 “Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction (“BMT Guidelines”) had been adopted by the Council, in 2021.

## Guidance for drafters of Test Guidelines

The TWO considered document TWP/6/8.

The TWO noted that the web-based TG template and database of approved characteristics was currently being migrated to cloud servers, including an upgrade to new technologies in infrastructure and program to address issues reported by users and enabling use for drafting individual authorities’ test guidelines.

The TWO noted the comment received in advance of the session proposing to facilitate the tracing of comments provided and changes implemented in draft Test Guidelines. The TWO agreed to wait until the changes to the web-based TG template had been implemented before considering whether to propose further action in this regard.

The TWO noted that interviews would be conducted in 2022 to collect requirements for the development of individual authorities’ test guidelines using the web-based TG template.

The TWO noted that training on the web-based TG template could be organized upon request.

## Revisions of Test Guidelines

The TWO considered document TWP/6/10.

### Relationship between Asterisked, Grouping and TQ characteristics

The TWO noted that no proposals had been received to revise document TGP/7 “Development of Test Guidelines” to clarify the relationship between asterisks in the Test Guidelines and characteristics in the technical questionnaires.

*Proposals for partial revisions of Test Guidelines*

The TWO agreed to propose the partial revisions of the Test Guidelines for Rose, as set out in document TWP/6/10, paragraph 23 and Annex X.

## Discussion on draft Test Guidelines

### Full draft Test Guidelines

#### Amaryllis (*Hippeastrum* Herb.) (Revision)

The subgroup discussed document TG/181/4(proj.2), presented by Ms. Katie Berbee (Netherlands), and agreed the following:

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| --- | --- |
| Char. 1 | to reduce scale to 5 notes |
| Char. 3 | to check whether to reduce scale to 5 notes |
| Char. 4 | to reduce scale to 5 notes |
| Char. 8 | to read “Only varieties with Bracts: anthocyanin coloration: absent or very weak to medium: …” |
| Char. 13 | to reduce scale to 5 notes |
| Char. 16 | to reduce scale to 5 notes |
| Char. 18 | to add illustrations and check order of states if illustrations are placed in a grid |
| Char. 19 | to have order of states (1) acute, (2) acuminate, (3) rounded |
| Char. 20 | to add example varieties and/or illustrations |
| Char. 21 | to add example varieties and/or illustrations |
| Char. 24 | to be added to TQ 5 |
| Char. 28 | to add illustrations and check order of states if illustrations are placed in a grid |
| Char. 34 | to add illustrations and check order of states if illustrations are placed in a grid |
| Char. 35 | to reduce scale to 3 notes |
| Char. 37 | - to have order of states (1) yellowish, (2) pinkish, (3) reddish, (4) purplish  - to add example varieties |
| Char. 39 | - to read “Stigma: diameter”  - to reduce scale to 5 notes |
| Ad. 2 | to read “Observations should be made on the basal part of the leaf.” |
| Ad. 3 | to read “Observations should be made from the top of the bulb to the base of the pedicel.” |
| Ad. 4 | to read “Observations should be made on the broadest part at middle third of peduncle.” |
| Ads. 5, 7, 8, 14 | to be deleted keep only one illustrations per explanations to indicate where observations should be made |
| Ad. 35 | to improve illustrations |
| Ad. 37 | to delete illustrations and keep explanation only |
| TQ 1 | to add 1.3 for indication of species |
| TQ 7.3 | to check whether options yes/no (please specify” |

#### \*Anthurium (*Anthurium* Schott) (Revision)

The subgroup discussed document TG/86/6(proj.3), presented by Mr. Koji Nakanishi (Japan), and agreed the following:

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| 5.3 (d), (e) | to add “with the following groups” after characteristic number |
| Char. 4 | - to delete example variety from state 3  - to add example variety “ANTHDOSDOH” for state 9 |
| Char. 15 | state 4 to read “strongly above” |
| Char. 18 | state 3: to replace current example variety with “ANTHDUBAQ” |
| Char. 19 | - to delete example variety from state 7  - to add example variety “ANTHDOSDOH” for state 9 |
| Char. 28 | to add example variety “ANTHIUFEN” for state 1 |
| Char. 30 | to delete “the” |
| Char. 35 | - to add example variety “ANTHIOWIR” for state 7  - to delete example variety from state 9 |
| Char. 38 | to reduce scale to 5 notes with states from “absent or very weak” to “very strong” |
| Chars. 40, 41, 43 | state to read “whitish” instead of “white” |
| 8.1 | explanation covering all characteristics to read “Unless otherwise indicated, observations should be made on fully grown plants with fully developed flowers.” |
| Ad. 5 | to read “… relative to the full size of the leaf blade” |
| Ad. 15 | to delete photo for state 1 |
| Ad. 21 | to read “… relative to the full size of the spathe” |
| Ad. 28 | to delete illustration for state 1 |
| Ad. 42 | first sentence to read “…1/3 to 2/3 of anthers…” |
| TQ 1 | to add 1.3 for indication of species |

#### Lavender (*Lavandula* L.) (Revision)

The subgroup discussed document TG/194/2(proj.2), presented by Ms. Laetitia Denecheau (European Union), and agreed the following:

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| --- | --- |
| 3.4.2 | to correct typo (“at least”) |
| 4.2.4 | to read “… 1 off-type is allowed” |
| 6.4 | example varieties for Plant type: with infertile bracts to be indicate with (9) |
| Table of Chars. | - to review example varieties  - to review explanation labels (a), … ( see comment on 8.1) |
| Char. 12 | to be indicated as MS/MG/VG |
| Char. 17 | to add illustration |
| Char. 18 | to read “Flowering stem: number of lateral branches above foliage” |
| Char. 19 | - to read “Flowering stem: length of the longest lateral branch above foliage”  - to add explanation “Observations should be made including the spike. |
| Char. 20 | to read “Spike: arrangement of flowers” and have states (1) solitary, (2) clustered |
| Char. 21 | - to read “Pedicel: length”  - to be moved after characteristic 39  - to add explanation |
| Char. 25 | to be indicated as MG/MS/VG |
| Char. 26 | to read “…ratio length from second whorl / number of whorls” |
| Chars. 32, 33 | to add explanation |
| Chars. 34, 35 | to remove underline |
| Char. 40 | to read “Calyx: color” |
| Char. 41 | to read “Calyx: density of pubescence” |
| Char. 44 | to have example varieties for varieties with and without fertile bracts |
| 8.1 | explanation covering all characteristics to read “Unless otherwise indicated all observations should be made when 80% of the spikes are flowering.” |
| 8.1 | to have the following explanations covering several characteristics:  (a) Observations should be made on fully developed leaves from the middle third of the main flowering stem.  (b) Observations should be made on the main flowering stem.  (c) The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color. |
| 8.2 | to check whether to add “Courtesy of…” to illustrations |
| Ad. 1 | - to delete species name  - to check whether to add more illustrations |
| Ad. 13 | to read “…, excluding the spike.” |
| Ad. 27 | to add illustration |
| Ad. 30 | - first sentence to read “Observations should be made on the broadest part of the bract.”  - to check whether to simplify or delete second sentence |
| Ad. 44 | to read “The beginning of flowering is reached when 20% of the individual plants have open flowers.” |
| TQ 1. | to add 1.3 for indication of species |
| TQ 4.1 | to use complete standard breeding scheme |
| TQ 5. | to check with other authorities whether all required characteristics are included or whether more should be added to harmonize TQ |
| TQ 5.6 | - to add exclusion for fertile bracts  - to add option “other (please specify)” |
| TQ 5.7 | “other (please specify)” |

#### \*Ling, Scots Heather (*Calluna vulgaris* (L.) Hull) (Revision)

The subgroup discussed document TG/94/7(proj.2), presented by Ms. Daniela Christ (Germany), and agreed the following:

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| 5.3 (d), (e) | to add “Gr. 1” etc. before the individual color groups |
| Char. 2 | state 5 to read “weeping” |
| Char. 18 | to add (\*) (TQ 5 char.) |
| 8.1 | explanation covering all characteristics to read “…when one third of the flowers are fully developed on 50% of the plants. …” |
| 8.1 (c) | to read “…below zero degrees Celsius.” |
| 8.1 (e) | to read “Observations should be made…” |
| Ad. 4 | to read “Observations should be made from the surface of the growing medium to the top of the plant.” |
| Ad. 24 | to be deleted |
| TQ 5.8, 5.9 | to add color groups as in 5.3 and add option “other” |

#### Magnolia (*Magnolia* L.)

The subgroup discussed document TG/MAGNO(proj.3), presented by Ms. Yaling Wang (China), and agreed the following:

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| 3.4.1 | to read “Each test should be designed to result in a total of at least 6 plants.” |
| 5.3 | to add “with the following groups” after characteristic number |
| 6.4 | to review formatting |
| Table of Chars. | to indicate all notes for QN characteristics with abbreviated QN scale (all notes from 1 to 9 or 1 to 5) |
| Char. 2 | - to check whether to add more states (variation within trees and shrubs; based on number of trunks, see Ad. 2) (at least three states for PQ)  - to check whether to add new state 2 “shrub to small tree”; if so, add explanation to Ad. 2 |
| Char. 7 | - to have notes 1, 2, 3  - to move after characteristic 58 |
| Char. 8 | have notes 1, 2, 3 |
| Char. 11 | to delete "main" (no secondary color) |
| Chars. 14 to 23 | to delete “mature” (information provided in (c)) |
| Char. 15 | to have notes 1 to 5 |
| Char. 17 | to have states from "very low" to "very high" (ratio) |
| Char. 19 | to read “Leaf: shape of apex” |
| Char. 20 | to be indicated as PQ |
| Char. 21 | - state 1 to read "absent or very weak"  - to add state 5 to read “very strong” |
| Char. 23 | - to read “Leaf blade: color of upper side”  - to add explanation “Observations should be made on the color covering the largest surface area. |
| Char. 25 | to read “color” |
| Char. 27 | to add (\*) (TQ 5 char.) |
| Char. 32 | to read “Flower: sepaloid tepals” |
| Char. 37 | to be indicated as PQ |
| Char. 38 | to delete “view” |
| Chars. 41, 46, 51 | - state 1 to read “none”  - state 10 to read “on margin” |
| Char. 42, 47, 52 | to add state 1 "none" |
| Char. 43 | - state 1 to read "none"  - to move state “red” after “orange” |
| Char. 48 | to be indicated as PQ |
| Char. 55 | - to read “Time of flowering in relation to vegetative growth” and modify example varieties according to new title  - state 2 to read “before or at same time”  - to add explanation |
| 8.1 (e) | in the second illustration: to use “tepals” (plural) |
| Ad. 2 | first sentence to read “… one obvious thick trunk” |
| Ad. 5 | to add “Observations should be made at time of beginning of flowering.” |
| Ad. 25 | to replace “colour” with “color” |
| Ad. 28 | - to add “All flower forms are observed in lateral view.”  - to improve illustrations |
| Ad. 29 | to be deleted |

#### Oxypetalum (*Oxypetalum coeruleum* (D. Don) Decne.)

The subgroup discussed document TG/OXYPE\_CAE(proj.1), presented by Ms. Mariko Ishino (Japan), and agreed the following:

|  |  |
| --- | --- |
| 5.3 (d) | to replace “Group” with “Gr.” |
| Table of Chars. | to add example varieties |
| Char. 1 | - to check whether to read “Plant: attitude of shoots”  - state 1 to read “erect”  - state 3 to read “horizontal” |
| Char. 4 | state 1 to read “absent or very sparse” |
| Char. 10 | state 1 to read “absent or very sparse” |
| Char. 13 | to check whether to be indicated as QL or add additional state of expression |
| Char. 15 | to check whether to be moved after flower characteristics |
| Char. 16 | to be moved after characteristic 19 |
| Char. 26 | to add “none” as state 1 and delete “Only varieties with…” |
| Char. 28 | to read “Corona: conspicuousness" and have states “conspicuous” and “inconspicuous” |
| Char. 29 | to read “Only varieties with conspicuous corona:…” |
| Ad. 2 | to read “Observations should be made from the base to the highest point of the plant.” |
| Ad. 22 | shapes to be presented in a grid (see TGP/14) |
| TQ 7 | to add ASW 16 “Where an image of the variety is to be provided” |

#### Poinsettia (*Euphorbia pulcherrima* Willd. ex Klotzsch) (Revision)

The subgroup discussed document TG/24/7(proj.1), presented by Ms. Laetitia Denecheau (European Union), and agreed the following:

|  |  |
| --- | --- |
| 1. | - to check whether to read “These Test Guidelines apply to all varieties of *Euphorbia pulcherrima* Willd. ex Klotzsch and its hybrids.”  - to check whether to specify individual hybrids or add GN 3 |
| 2.2 | to read “The material is to be supplied in the form of rooted cuttings with known phytoplasma status. The plants should not be pinched.” |
| 3.3.3 | - first paragraph to be deleted  - second paragraph to be moved to Chapter 8.1 as explanation covering all characteristics |
| 5.3 (b), (c) | to add “with the following groups” after the characteristic number and the following color groups:  Gr. 1: white  Gr. 2: yellow  Gr. 3: pink  Gr. 4: orange red  Gr. 5: red  Gr. 6: purple |
| 5.3 (f) | to be deleted as grouping characteristic |
| Table of Chars. | - to indicate all notes for QN characteristics with abbreviated QN scale  - to review/add example varieties |
| Char. 1 | to be indicated as VG |
| Char. 2 | to be indicated as MG/VG |
| Chars. 3, 4 | to be indicated as MG/MS/VG |
| Char. 5 | - to be indicated as VG  - to have states from “very light” to “very dark” |
| Char. 6 | - to be indicated as VG  - to read “… on middle third” |
| Chars. 8, 9 | to be indicated as MG/MS/VG |
| Chars. 10, 11 | to be indicated as VG |
| Char. 12 | - to be indicated as PQ and VG  - to check whether to read “…of upper side” (same for characteristics 13 to 17) |
| Char. 13 | - to be indicated as VG  - to reduce scale to 5 notes  - state “strong” to read “dark” |
| Chars. 14 to 17 | to be indicated as VG |
| Chars. 18, 19 | to be indicated as MG/VG |
| Char. 20 | to be indicated as VG |
| Char. 21 | to be indicated as MG/MS/VG |
| Char. 22 | - to be indicated as VG  - to reduce scale to 5 notes with states from “very light” to “very dark” |
| Chars. 23, 24 | to be indicated as VG |
| Chars. 25, 26 | to be indicated as MG/MS/VG |
| Chars. 27, 28 | to be indicated as VG |
| Char. 29 | to be indicated as MG/VG |
| Char. 30 | - to be indicated as MG/MS/VG  - to delete “(including petiole)” and move information as explanation to 8.2 |
| Char. 31 | - to be indicated as MG/MS/VG  - to delete “(including petiole)” |
| Char. 32 | to be indicated as VG |
| Char. 35 | - to delete “the” from title and states 3 to 5  - to move “throughout” to be the last state  - to add explanation |
| Char. 36 | - to delete “the” from title  - to add new state 4 “flushed”  - to add illustration |
| New after Char. 36 | to add a new char. “Bract: area of the secondary color” with states (1) small, (2) medium, (3) large |
| Char. 38 | - to delete “the” from title  - to have states (1) none, (2) at margin, (3) at center, (4) at veins, (5) throughout |
| Char. 39 | to delete “the” from title |
| Char. 42, 45 | - to delete “the” from title  - state 2 to read “at margin”, state 3 to read “throughout” |
| Char. 43, 46 | - to delete “the” from title  - add state “flushed” |
| Char. 47 | - to be indicated as VG and QN and to have 5 states |
| Char. 48 | - to be indicated as VG and QN and to have 5 states  - to add illustration |
| Char. 49 | - to be indicated as VG  - to delete “between veins” |
| Chars. 50 to 53 | to be indicated as VG |
| Char. 55 | to be indicated as MG/VG |
| Ad. 14 | to read “color” instead of “colour” |
| TQ 1. | to add 1.3 for indication of crossing |
| TQ 5.2, 5.3 | to add color groups as in 5.3 and option “other (please specify)” |
| TQ 5.6 | to be deleted |
| TQ 6 | to add example |
| TQ 9.3 | to check whether to add more detailed questions on phytoplasma |

#### \*Statice (*Limonium* Mill., *Goniolimon* Boiss. and *Psylliostachys* (Jaub. & Spach) Nevski) (Revision)

The subgroup discussed document TG/168/4(proj.3), presented by Mr. Marco Hoffman (Netherlands), and agreed the following:

|  |  |
| --- | --- |
| Coverage | to add UPOV codes GONIO and PSYLL |
| 1. | to read “These Test Guidelines apply to all varieties of *Limonium* Mill., *Goniolimon* Boiss. and *Psylliostachys* (Jaub. & Spach) Nevski.” |
| 5.3 (d), (e) | - to add “with the following groups” after characteristic number and add “Gr:…” to all color groups  - to have same order of colors as in TQ 5.4 and 5.5 |
| Char. 1 | to delete (a) (reorder labels alphabetically) |
| Char. 5 | state 4 to read “medium obovate” |
| Char. 8 | to have states from "absent or very sparse" to "very dense" |
| Char. 9 | to have states from "absent or very sparse" to "very dense" |
| Char. 19 | to delete species indicated as example varieties from types III, V and VI |
| Char. 20 | to be indicated as MS/VG |
| Char. 30 | - to have states from “very small” to “very large”  - to add explanation “The largest diameter should be observed.” and the following illustration: |
| Char. 32 | - to be indicated as QL  - to read “Corolla: incision at apex of corolla lobe” |
| 8.1 | explanation covering all characteristics to read “Unless otherwise indicated, observations should be made at the time of full flowering.” |
| Ad. 1 | to read “Observations should be made on representative stems from the base of the plant to the top of the inflorescence.” |
| Ad. 3 | to read “Observations should be made from the base to the top of the leaf, including the petiole.” |
| Ad. 4 | to read “Observations should be made at the broadest part of leaf, at a right angle to the midveine.” |
| Ad. 13 | to read “Observations should be made…” |
| Ad. 14 | to read “Observations should be made in the middle third of the peduncle, excluding wings, using a caliper.” |
| Ad. 16 | to read “Observations should be made in the middle third of the plant.” |
| Ad. 18 | to read “Observations should be made from base to top of the largest stipule.” |
| Ad. 24 | - to delete “(width)” from second sentence  - to replace current illustration with new one: |
| Ad. 37 | to read “The time of beginning of flowering is reached when 30% of inflorescences have open flowers.” |
| 9. | to review format (see document TGP/7) and add countries |
| TQ 1. | to be updated (see changes on coverage) |
| TQ 5.4, 5.5 | - to be presented with char. number (i) RHS Colour Chart and (ii) list of colors  - to add option "other" to list of colors |
| TQ 5.5 | to read "Corolla: color" (char. 33) |
| TQ 6. | to replace notes with names of states “few” and “many” |

#### Weigela (*Weigela* Thunb.) (Revision)

The subgroup discussed document TG/148/3(proj.2), presented by Ms. Stéphanie Christien (France), and agreed the following:

|  |  |
| --- | --- |
| Chars. 21, 22 | to add explanation “Observations should be made on the color covering the largest surface area.” in Chapter 8.2 |
| Char. 26 | - to read “Corolla: width”  - to have states from “very narrow” to “very broad” |
| Char. 27 | - to read “Corolla: length in relation to width”  - to have states “longer than broad”, “as long as broad” and “broader than long” |
| Char. 28 | to add illustration |
| Char. 34 | to add illustration |
| 8.1 | explanation covering all characteristics to read “Unless otherwise indicated all observations should be made when 50% of the inflorescences have open flowers.” |
| 8.1 (e) | to read “Observations should be made on the upper side of the leaf blade.” |
| 8.1 (h) | - length of flower to be indicated starting from base of sepals  - to replace “diameter” by “width” |
| Ad. 8 | - to be improved (line to indicate length should be parallel to the midrib and remove background) |
| Ad. 9 | - to be improved (line to indicate width should be vertical to the midrib and remove background) |
| Ad. 41 | to add illustration for state 2 |
| 9. | to review format of literature references (see TGP/7, GN 30) |

### Partial revision

#### Rose (*Rosa* L.)

The subgroup discussed document TWP/6/10, Annex X, presented by Ms. Laetitia Denecheau (France), and agreed with the proposed changes.

## Recommendations on draft Test Guidelines

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

The TWO agreed that the following draft Test Guidelines should be submitted to the TC for adoption at its fifty-eighth session, to be held in Geneva on October 24 and 25, 2022, on the basis of the following documents and the comments in this report:

#### Full draft Test Guidelines

|  |  |
| --- | --- |
| Subject | Basic document(s) (2022) |
| \*Anthurium (*Anthurium* Schott) (Revision) | TG/86/6(proj.3) |
| \*Ling, Scots Heather (*Calluna vulgaris* (L.) Hull) (Revision) | TG/94/7(proj.2) |
| \*Statice (*Limonium* Mill., *Goniolimon* Boiss. and *Psylliostachys* (Jaub. & Spach) Nevski) (Revision) | TG/168/4(proj.3) |

#### Partial revision

|  |  |
| --- | --- |
| Subject | Basic document(s) (2022) |
| Rose (*Rosa* L.) (Partial revision: Technical Questionnaire) | TG/11/8 Rev. and TWP/6/10, Annex X |

*(b) Test Guidelines to be discussed at the fifty-fifth session*

The TWO agreed to discuss the following draft Test Guidelines at its fifty-fifth session:

#### Full draft Test Guidelines

|  |  |
| --- | --- |
| Subject | Basic document(s) (2022) |
| \*Amaryllis (*Hippeastrum* Herb.) (Revision) | TG/181/4(proj.2) |
| Ginkgo (*Ginkgo biloba* L.) | New |
| \*Lavender (*Lavandula* L.) (Revision) | TG/194/2(proj.2) |
| Lotus (*Nelumbo* Adans.) | New |
| Magnolia (*Magnolia* L.) | TG/MAGNO(proj.3) |
| *Leucanthemum* Mill. | New |
| \**Oxypetalum coeruleum* (D. Don) Decne. | TG/OXYPE\_CAE(proj.1) |
| Poinsettia (*Euphorbia pulcherrima* Willd. ex Klotzsch) (Revision) | TG/24/7(proj.1) |
| \*Weigela (*Weigela* Thunb.) (Revision) | TG/148/3(proj.2) |

#### Partial revision

|  |  |
| --- | --- |
| Subject | Basic document(s) (2022) |
| Oncidium (*Oncidium* Sw.; ×*Oncidesa* Hort.; ×*Ionocidium* Hort.; ×*Zelenkocidium* J.M.H.Shaw.)  (Partial revision: example varieties, Chars./Ads. 27, 30, 46, 50, 66, 70, 87) | TG/283/1 Rev. |

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

### (c) Possible Test Guidelines to be discussed in 2024

The TWO agreed that it should consider the development of Test Guidelines for the following at a future session:

|  |  |
| --- | --- |
| Subject | Basic document(s) (2022) |
| Eucalyptus (*Eucalyptus* L’Hér.) (Partial revision) | TG/296/1 (QZ) |
| Helleborus (*Helleborus* L.) | New (NL) |
| Pot Azalea (*Rhododendron simsii* Planch.) and Rhododendron (*Rhododendron* L.) (Revision to combine TGs) | TG/42/6 and TG/140/4 Corr. (DE) |
| Tuberous Begonia Hybrids (*Begonia* ×*tuberhybrida* Voss) (Revision) | TG/107/3 |

### (d) Participation in discussions of Test Guidelines from other TWPs

The TWO agreed to propose that the following experts be added as interested experts to the following draft Test Guidelines being discussed by the Technical Working Party for Fruit Crops (TWF), subject to the deadlines agreed in document TWF/52/10 “Report”, Annex IV:

|  |  |
| --- | --- |
| Subject | Interested experts (countries/organizations) [[1]](#footnote-2) |
| Hazelnut (*Corylus avellana* L.; *Corylus colurna* L.) (Revision) | CA, HU |
| Mulberry (*Morus* L.) | HU |

## Chairperson

The TWO agreed to propose to the TC that it recommend to the Council to elect Ms. Hilary Papworth (United Kingdom) as the next chairperson of the TWO.

## Date and place of the next session

The TWO noted that no invitations for the venue of its fifty-fifth session had been received. The TWO noted that a decision on the date and place of its next session would be taken by the Council, at its fifty-sixth session, to be held on October 28, 2022.

The TWO noted that UPOV members could contact the Office of the Union with offers of date and place to host the next TWO session. If an offer was received sufficiently before the fifty-sixth session of the Council, the offer could be considered by the Council at its fifty-sixth session.

The TWO agreed that its fifty-fifth session should be held via electronic means, from June 12 to 16, 2023, if no alternative offer was received from a member of the Union.

Future program

The TWO agreed that documents for its fifty-fifth session should be submitted to the Office of the Union by April 29, 2023. The TWO noted that items would be deleted from the agenda if the planned documents have not reached the Office of the Union by the agreed deadline.

The TWO agreed 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 (document to be prepared by the Office of the Union)

4. Development of guidance and information materials (documents to be prepared by the Office of the Union)

5. Information and databases

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

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

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

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

6. Cooperation in examination (document to be prepared by the Office of the Union)

7. Information required to enhance the use of existing DUS test reports (document to be prepared by New Zealand and documents invited)

8. Increasing participation in the work of the TC and the TWPs (document to be prepared by the Office of the Union)

9. Disease resistance in ornamental crops (document to be prepared by the Netherlands)

10. New issues arising for DUS examination (documents invited)

11. Molecular techniques (document to be prepared by the Office of the Union)

12. Variety denominations (document to be prepared by the Office of the Union and documents invited)

13. Report on court cases dealing with technical matters (document invited)

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

15. Ornamental varieties of agricultural, fruit or vegetable crops (document to be prepared by France, the United Kingdom and documents invited)

16. Using Test Guidelines for hybrids of ornamental plants not covered by Test Guidelines (documents to be prepared by the European Union and Germany and documents invited)

17. Test Guidelines

(i) Guidance for drafters of Test Guidelines (document to be prepared by the Office of the Union)

(ii) Revision of Test Guidelines (documents to be prepared by the Office of the Union)

(iii) Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if applicable)

(iv) Discussion on draft Test Guidelines (Subgroups)

(v) Recommendations on draft Test Guidelines

18. Date and place of the next session

19. Future program

20. Adoption of the Report on the session (if time permits)

21. Closing of the session

The TWO adopted this report at the close of its session.

[Annex I follows]

LIST OF PARTICIPANTS

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[Annex II and III follow]

[see pdf version]

[Annex IV follows]

LIST OF LEADING EXPERTS

**DRAFT TEST GUIDELINES TO BE SUBMITTED   
TO THE TECHNICAL COMMITTEE IN 2022**

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

**by July 29, 2022**

Full draft Test Guidelines

| Species | Basic Document(s) | Leading expert(s) |
| --- | --- | --- |
| \*Anthurium (*Anthurium* Schott) (Revision) | TG/86/6(proj.3) | Mr. Koji Nakanishi (JP) |
| \*Ling, Scots Heather (*Calluna vulgaris* (L.) Hull) (Revision) | TG/94/7(proj.2) | Ms. Daniela Christ (DE) |
| \*Statice (*Limonium* Mill., *Goniolimon* Boiss. and *Psylliostachys* (Jaub. & Spach) Nevski) (Revision) | TG/168/4(proj.3) | Mr. Marco Hoffman (NL) |

Partial revision

| Species | Basic Document(s) | Leading expert(s) |
| --- | --- | --- |
| Rose (*Rosa* L.) (Partial revision: Technical Questionnaire) | TG/11/8 Rev. and TWP/6/10, Annex X | Ms. Laetitia Denecheau (QZ) |

**DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWO/55**

(\* indicates possible final draft Test Guidelines)

**(Guideline date for Subgroup draft to be submitted by Leading Expert: March 3, 2023**

**Guideline date for comments to Leading Expert by Subgroup: March 31, 2023)**

New draft to be submitted to the Office of the Union

**before April 29, 2023**

Full draft Test Guidelines

| Species | Basic Document(s) | Leading expert(s) | Interested experts (States/Organizations) [[2]](#footnote-3) |
| --- | --- | --- | --- |
| \*Amaryllis (*Hippeastrum* Herb.) (Revision) | TG/181/4(proj.2) | Ms. Katie Berbee (NL) | CN, JP, MX, QZ, ZA, CIOPORA, Office |
| Ginkgo (*Ginkgo biloba* L.) | New | Mr. Yongqi Zheng (CN) | HU, KR, QZ, NZ, CIOPORA, Office |
| \*Lavender (*Lavandula* L.) (Revision) | TG/194/2(proj.2) | Ms. Laetitia Denecheau (QZ) | BG, CA, FR, GB, JP, MX, NZ, QZ, ZA, CIOPORA, Office |
| Lotus (*Nelumbo* Adans.) | New | Mr. Daike Tian (CN) | JP, CIOPORA, Office |
| Magnolia (*Magnolia* L.) | TG/MAGNO(proj.3) | Ms. Wang Yaling (CN) | AU, CA, FR, GB, JP, KR, NZ, QZ, CIOPORA, Office |
| *Leucanthemum* Mill. | New | Ms. Hilary Papworth (GB) | CA, FR, JP, QZ, ZA, CIOPORA, Office |
| *\*Oxypetalum coeruleum* (D. Don) Decne. | TG/OXYPE\_CAE (proj.1) | Ms. Mariko Ishino (JP) | NL, QZ, CIOPORA, Office |
| Poinsettia (*Euphorbia pulcherrima* Willd. ex Klotzsch) (Revision) | TG/24/7(proj.1) | Ms. Laetitia Denecheau (QZ) | CA, CN, GB, JP, MX, PL, QZ, CIOPORA, Office |
| \*Weigela (*Weigela* Thunb.) (Revision) | TG/148/3(proj.2) | Ms. Stéphanie Christien (FR) | CA, DE, GB, HU, QZ, CIOPORA, Office |

Partial revision

| Species | Basic Document(s) | Leading expert(s) | Interested experts (States/Organizations) 2 |
| --- | --- | --- | --- |
| Oncidium (*Oncidium* Sw.; ×*Oncidesa* Hort.; ×*Ionocidium* Hort.; ×*Zelenkocidium* J.M.H.Shaw.)  (Partial revision: example varieties, Chars./Ads. 27, 30, 46, 50, 66, 70, 87) | TG/283/1 Rev. | Mr. Marco Hoffman (NL) |  |

Draft Test Guidelines to possibly be discussed in 2024

| Species | Basic Document(s) |
| --- | --- |
| Eucalyptus (*Eucalyptus* L’Hér.) (Partial revision) | TG/296/1 (QZ) |
| Helleborus (*Helleborus* L.) | New (NL) |
| Pot Azalea (*Rhododendron simsii* Planch.) and Rhododendron (*Rhododendron* L.) (Revision to combine TGs) | TG/42/6 and TG/140/4 Corr. (DE) |
| Tuberous Begonia Hybrids (*Begonia* ×*tuberhybrida* Voss) (Revision) | TG/107/3 |

[End of Annex IV and of document]

1. for name of experts, see list of participants [↑](#footnote-ref-2)
2. for name of experts, see List of Participants. [↑](#footnote-ref-3)