

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

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**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

1. 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.
2. The session was opened by Ms. Ashley Balchin (Canada), Chairperson of the TWO, who welcomed the participants.
3. 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.
4. 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

5. 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*

6. 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*

7. 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

8. The TWO considered document TWP/6/12.

*Participation at TWP meetings by electronic means*

9. 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*

10. 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.

11. 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.

12. 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

13. The TWO considered document TWP/6/9.

14. 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

15. 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.

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

17. 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.

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

19. 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.

20. 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

21. The TWO considered document TWP/6/1.

*Matters for consideration by the Technical Working Parties*

Document UPOV/INF/23 “UPOV Code System”

22. 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*

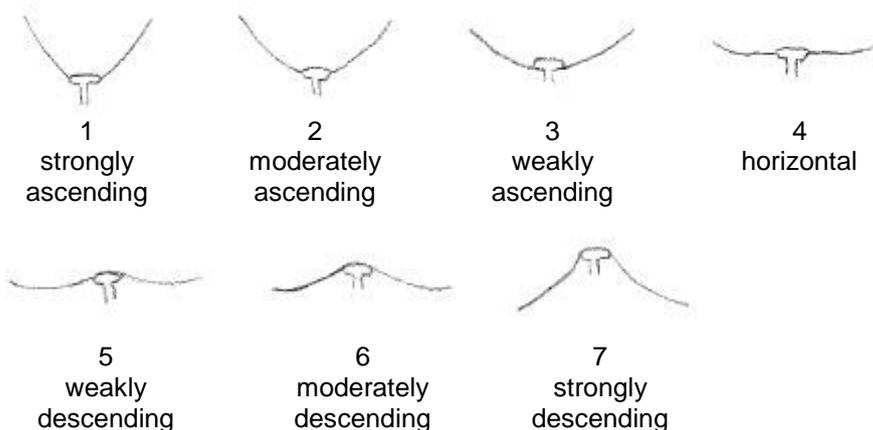
23. The TWO agreed to propose amending document TGP/7 to remove the requirement to provide example varieties for asterisked quantitative and pseudo-qualitative characteristics if illustrations are provided, to read as follows:

~~“(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 3.4) it is necessary to provide example varieties.~~

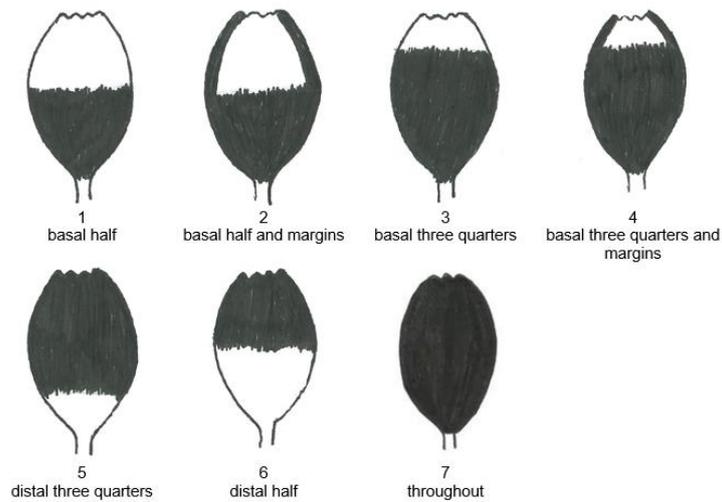
“In species where the range of expression is high at the variety level for a quantitative characteristic (which cannot be measured), it would not be appropriate to illustrate the states of expression exclusively with a drawing or photograph. In these cases, example varieties would be required.”

24. 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:

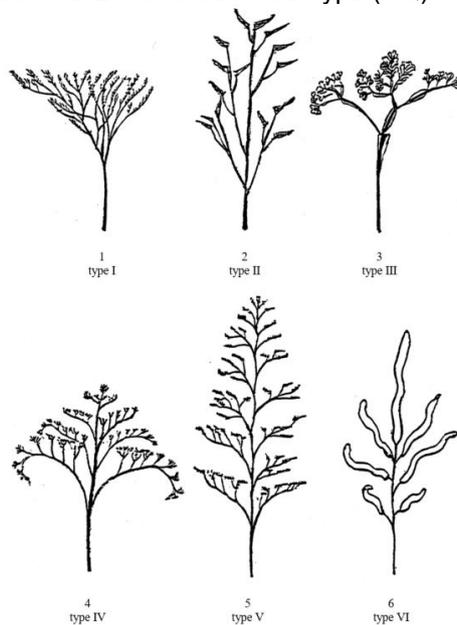
- Document TG/336/1 “Coreopsis”:  
Ad. 24: Ray floret: attitude of basal part (QN)



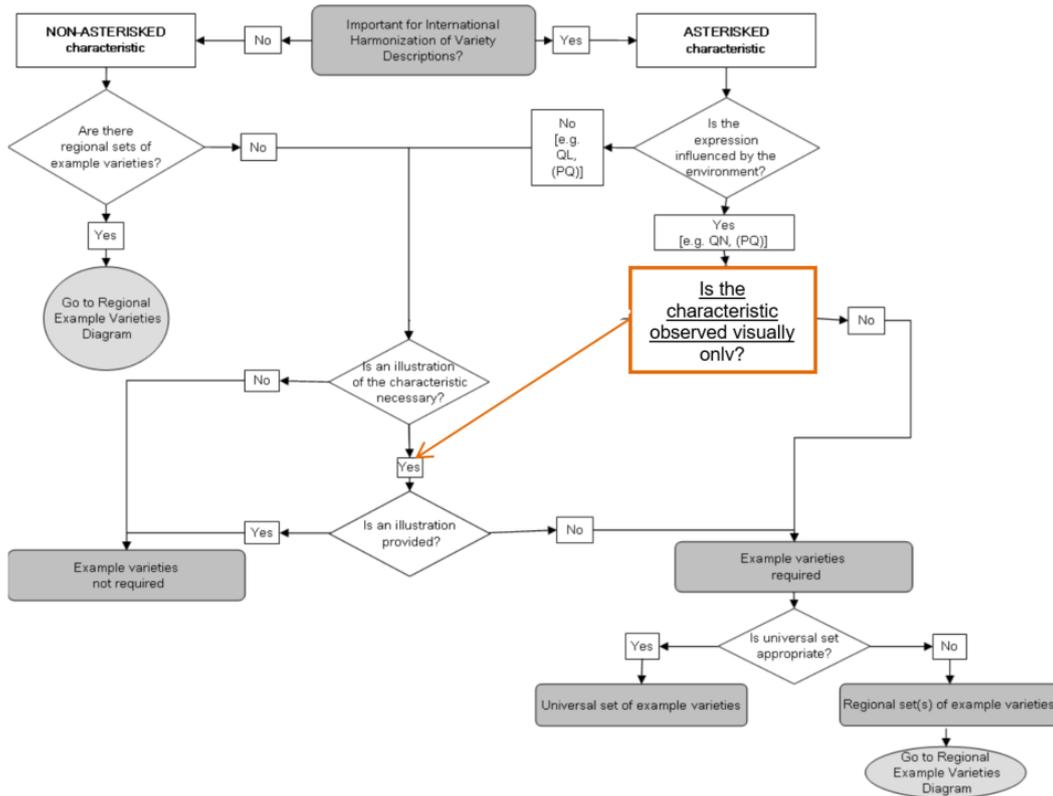
Ad. 29: Ray floret: distribution of main color (PQ)



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



25. 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)*

26. 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.

27. 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*

28. 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)*

29. The TWO considered document TWP/6/11.

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

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

32. 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.

33. 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*

34. 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.

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

*Matters for information*

36. 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

37. 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.

38. 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.

39. 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

40. 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*

41. The TWO considered document TWP/6/4.

GENIE database

42. 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

43. 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.

44. 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*

45. 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.

46. 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.

#### *TWP checking*

47. 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

48. 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*

49. The TWO considered document TWP/6/2.

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

51. 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*

52. The TWO considered document TWP/6/5.

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

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

54. 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.

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

56. 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”

57. 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”.

58. 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.

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

60. 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

61. 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*

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

Experiences with new types and species

63. 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

64. The TWO considered document TWP/6/7.

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

65. 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*

66. 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.

67. 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.

68. 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.

69. 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.

70. 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*

71. 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*

72. 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’)”*

73. 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

74. The TWO considered document TWP/6/8.

75. 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.

76. 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.

77. 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.

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

Revisions of Test Guidelines

79. The TWO considered document TWP/6/10.

*Relationship between Asterisked, Grouping and TQ characteristics*

80. 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*

81. 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)

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

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 " <u>Only varieties with Bracts: anthocyanin coloration: absent or very weak to medium:</u> ..."
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)

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

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)

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

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)

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

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.)

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

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.)

87. 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)

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

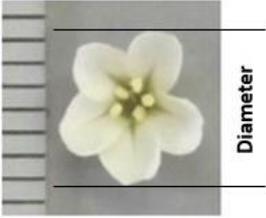
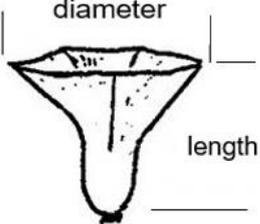
1.	- to check whether to read “These Test Guidelines apply to all varieties of <i>Euphorbia pulcherrima</i> Willd. ex Klotzsch and its hybrids.” - to check whether to specify individual hybrids or add GN 3
2.2	to read “The material is to be supplied in the form of rooted cuttings with known phytoplasma 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)

89. 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 <i>Limonium</i> Mill., <i>Goniolimon</i> Boiss. and <i>Psylliostachys</i> (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)

90. 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
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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.)

91. 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*

92. 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

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

Partial revision

<u>Subject</u>	<u>Basic document(s) (2022)</u>
Rose ( <i>Rosa</i> 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*

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

Full draft Test Guidelines

<u>Subject</u>	<u>Basic document(s) (2022)</u>
*Amaryllis ( <i>Hippeastrum</i> Herb.) (Revision)	TG/181/4(proj.2)
Ginkgo ( <i>Ginkgo biloba</i> L.)	New

*Lavender ( <i>Lavandula</i> L.) (Revision)	TG/194/2(proj.2)
Lotus ( <i>Nelumbo</i> Adans.)	New
Magnolia ( <i>Magnolia</i> L.)	TG/MAGNO(proj.3)
<i>Leucanthemum</i> Mill.	New
* <i>Oxypetalum coeruleum</i> (D. Don) Decne.	TG/OXYPE_CAE(proj.1)
Poinsettia ( <i>Euphorbia pulcherrima</i> Willd. ex Klotzsch) (Revision)	TG/24/7(proj.1)
*Weigela ( <i>Weigela</i> Thunb.) (Revision)	TG/148/3(proj.2)

#### Partial revision

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

94. 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*

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

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

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

96. 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:

<u>Subject</u>	<u>Interested experts (countries/organizations) <sup>1</sup></u>
Hazelnut ( <i>Corylus avellana</i> L.; <i>Corylus colurna</i> L.) (Revision)	CA, HU
Mulberry ( <i>Morus</i> L.)	HU

#### Chairperson

97. 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.

<sup>1</sup> for name of experts, see list of participants

#### Date and place of the next session

98. 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.

99. 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.

100. 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

101. 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.

102. 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

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

[Annex I follows]

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Leontino TAVEIRA (Mr.), Head of Technical Affairs and Regional Development (Latin America, Caribbean)  
Hend MADHOUR (Ms.), IT Officer  
Manabu SUZUKI (Mr.), Technical/Regional Officer (Asia)  
Romy OERTEL (Ms.), Secretary II  
Jessica MAY (Ms.), Secretary I  
Kasumi FALQUET (Ms.), Administrative support

[Annex II and III follow]

 Bundessortenamt

## BUNDESSORTENAMT

*Federal Plant Variety Office*



Independent Federal authority under the jurisdiction of the  
Federal Ministry of Food and Agriculture (BMEL)

Elmar Pfülb, President

 Bundessortenamt

## Federal Plant Variety Office

### Tasks and responsibilities

<b>Granting of Plant Breeders' Rights</b>	<b>National Listing</b>
To protect the <b>intellectual property</b> on a plant variety	To protect the <b>users</b> of seeds of agricultural and vegetable varieties
whole plant kingdom	Agricultural, vegetable and fruit varieties
10 Examination Boards	10 Variety Committees
§ legal basis: <b>Plant variety protection Law</b>	§ legal basis: <b>Seed Act</b>
<b>9 Boards of appeal</b>	

Elmar Pfülb      Bundessortenamt - Federal Plant Variety Office      2022      1

 Bundessortenamt		<h2 style="text-align: center;">Federal Plant Variety Office</h2> <h3 style="text-align: center;">Tasks and responsibilities</h3>	
<b>Granting of Plant Breeders' Rights</b>		<b>National Listing</b>	
To protect the <b>intellectual property</b> on a plant variety		To protect the <b>users</b> of seeds of agricultural and vegetable varieties	
		<b>Descriptive Variety Lists</b>	
<b>Variety and Seed Affairs:</b> National Co-ordination and international Co-operation		<b>Plant Genetic Ressources, Gene Banks</b>	
<b>Better Regulation and Policy Making:</b> Support of the Ministry		<b>Biopatent Monitoring</b>	
Elmar Pfülb	Bundessortenamt - Federal Plant Variety Office	2022	2

 Bundessortenamt		<h2 style="text-align: center;">History of variety testing and Plant breeders rights</h2>	
<p>1869</p> <p>1888</p> <p>1905</p> <p>1934</p> <p>1953</p> <p>1968</p> <p>1968</p> <p>1985</p> <p>1990</p> <p>1995</p> <p>1997</p> <p>1998</p>	<p>Foundation of the world's first seed testing station in Tharandt/Saxony (Standardized rules for seed testing)</p> <p>Comparative trials by DLG (Deutsche Landwirtschafts Gesellschaft)</p> <p>DLG-Hochzuchtregister (Register for qualified varieties)</p> <p>Statutory order for admission of varieties and certification of seeds (Reichssortenregister)</p> <p>Variety and Seed Act (PBR, NL, Certification) <i>Installation of the Bundessortenamt as independent federal authority</i></p> <p>Seed Act and Variety Protection Act</p> <p><b>Member of UPOV</b></p> <p>New Seed Act and new Variety Protection Act</p> <p>Validity of law for the whole of the re-united Germany</p> <p>Start of European PBR [valid in all European member states]</p> <p>New Variety Protection Act</p> <p><b>Ratification of UPOV Convention 1991</b></p>	<p>➤ <i>first ornamental varieties protected in 1970 (Roses)</i></p>	
Elmar Pfülb	Bundessortenamt - Federal Plant Variety Office	2022	3

 Bundessortenamt

## Organisational structure

**President**

Division 1	Division 2	Division 3
<b>Administration</b> → Organisation → Internal Services → Personnel → Budget, Controlling → Legal Affairs → Variety Administration → IT	<b>VCU-testing, DUS-testing and Plant Genetic Resources</b> → Testing for Value of Cultivation and Use for National Listing → Testing for Distinctness, Uniformity and Stability for Plant Breeders' Rights and National Listing → Descriptive Variety Lists → Gene Banks	<b>Test Management</b> → Laboratory → Testing Stations and Property Management → Operational Safety

**Directly responsible to the President:**

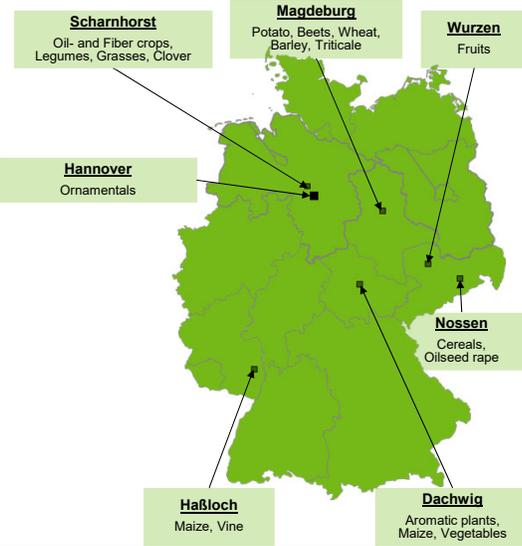
- Section P1: National and International Variety and Seed Affairs, Coordination Centre for the Ministry of Food and Agriculture
- Section P2: Communication, Biopatent-Monitoring, Quality Management

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Bundessortenamt - Federal Plant Variety Office
2022
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 Bundessortenamt

## Organisational structure

- Headquarters: Hannover
- 7 testing stations



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Bundessortenamt - Federal Plant Variety Office
2022
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 Bundessortenamt

## Organisational structure

- Headquarters: Hannover
- 7 testing stations
- ~ 300 employees
- Gazette:



Hannover Headquarters and testing station

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 Bundessortenamt

## Federal Plant Variety Office Financial year 2021

Income	14,2 Mio. €
Expenditures	24,4 Mio. €
Salaries	14,6 Mio. €
Administrative/operational expenditures	8,3 Mio. €
Investments	1,5 Mio. €
Cost coverage rate (fee related activities)	76 %

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 Bundessortenamt

## Variety and seed affairs

National Co-ordination and Co-operation	Representation and Participation
<ul style="list-style-type: none"> <li>• Offices of the Federal Government and Federal States</li> </ul>	<ul style="list-style-type: none"> <li>• Commission of EU</li> <li>• Council of EU</li> <li>• CPVO</li> </ul>
<ul style="list-style-type: none"> <li>• Chambers of Agriculture</li> <li>• Regional Offices</li> </ul>	<ul style="list-style-type: none"> <li>• UPOV</li> </ul>
<ul style="list-style-type: none"> <li>• Julius Kühn-Institute</li> <li>• Max Rubner-Institute</li> </ul>	<ul style="list-style-type: none"> <li>• OECD</li> <li>• FAO</li> </ul>
<ul style="list-style-type: none"> <li>• Seed certification agencies</li> <li>• Seed marketing control agencies</li> </ul>	<ul style="list-style-type: none"> <li>• other international bodies</li> </ul>

**CPVO** = Community Plant Variety Office  
**OECD** = Organisation for Economic Co-operation and Development  
**UPOV** = International Union for the Protection of New Varieties of Plants  
**FAO** = Food and Agriculture Organization of the United Nations

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 Bundessortenamt

## Genebank responsibilities

National Programme for Maintenance and sustainable Use of Plant Genetic Resources in agricultural and horticultural Crops

- Coordination of the German genebank for ornamental species
- Development and Coordination of decentralized genebank networks for Berry fruits, Pear, Wild fruits, Seed and vegetatively propagated Ornamentals, Rhododendron
- Maintenance of gene bank collections in Apple, Strawberry, Plum, Grape vine, Berry fruits, Pear, Wild fruits Seed and vegetatively propagated Ornamentals, Roses



Deutsche Genbank Zierpflanzen  
Vielfalt bewahren



Deutsche Genbank Obst  
Vielfalt bewahren



Deutsche Genbank Reben  
Vielfalt bewahren

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## National Listing

**Ensuring that growers have suitable plant varieties available for their climatic conditions and uses**

➤ required for commercialisation of seed of

**agricultural species**                      **vegetable species**

**DUS + VCU**                                      **DUS**

**VCU = Value for Cultivation and Use**                      **DUS = Distinct, Uniform, Stable**

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## National Listing

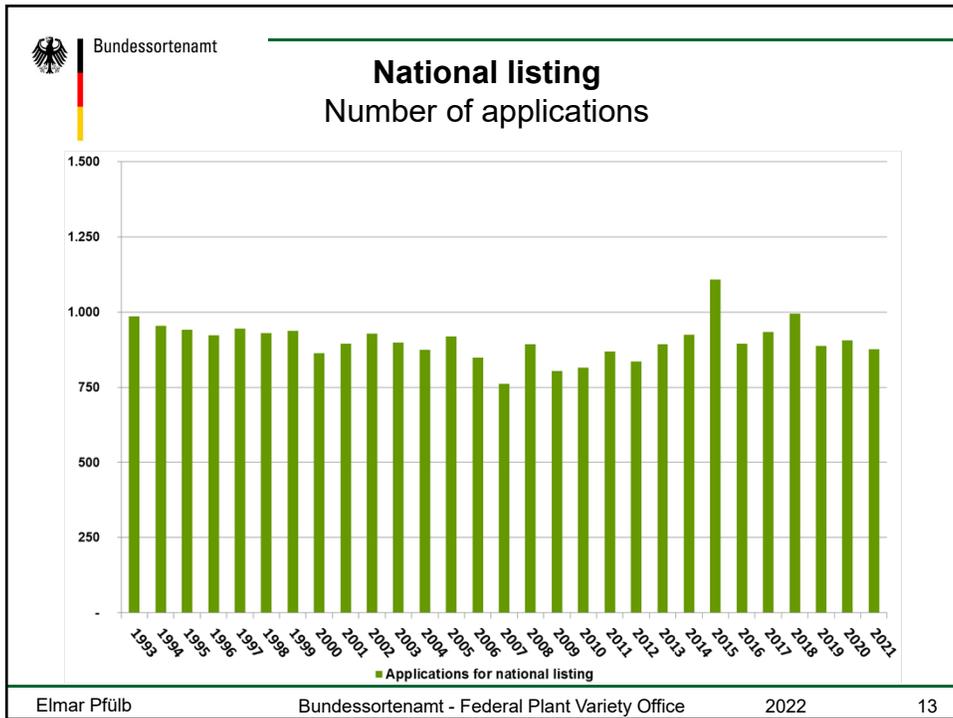
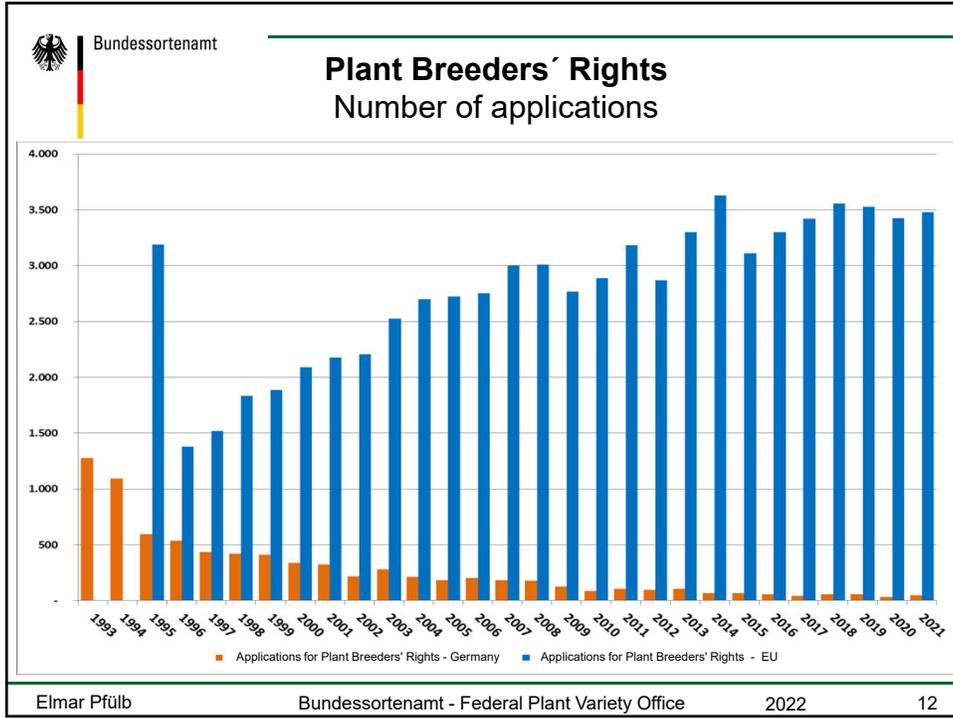
- **Value for Cultivation and Use**
  - ✓ Yield
  - ✓ Quality
  - ✓ Resistances to pests and diseases
  - ✓ Agronomic characteristics

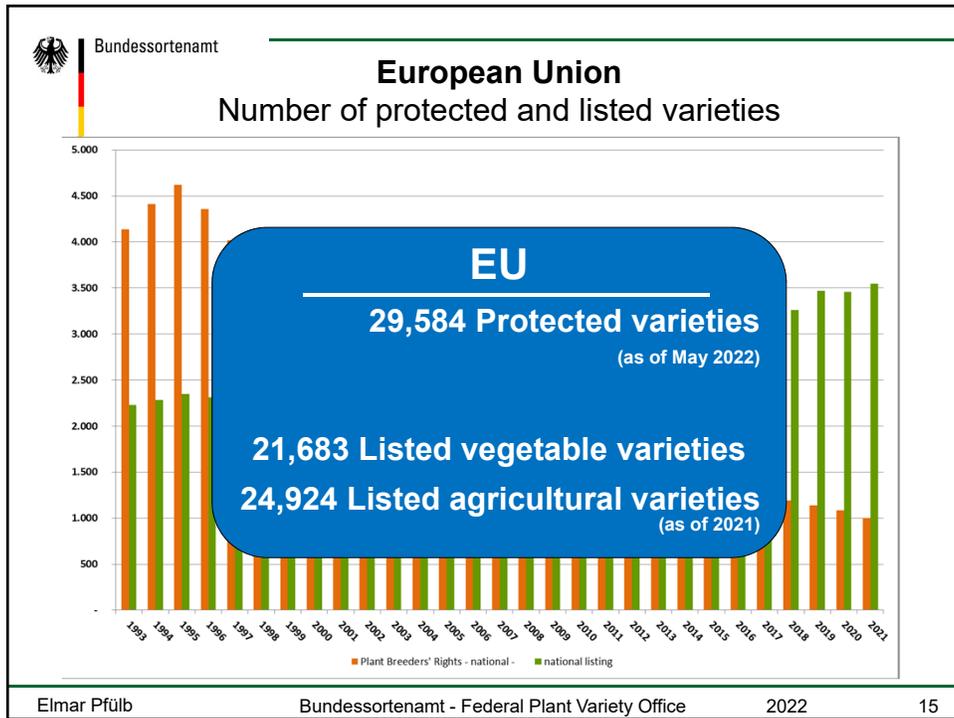
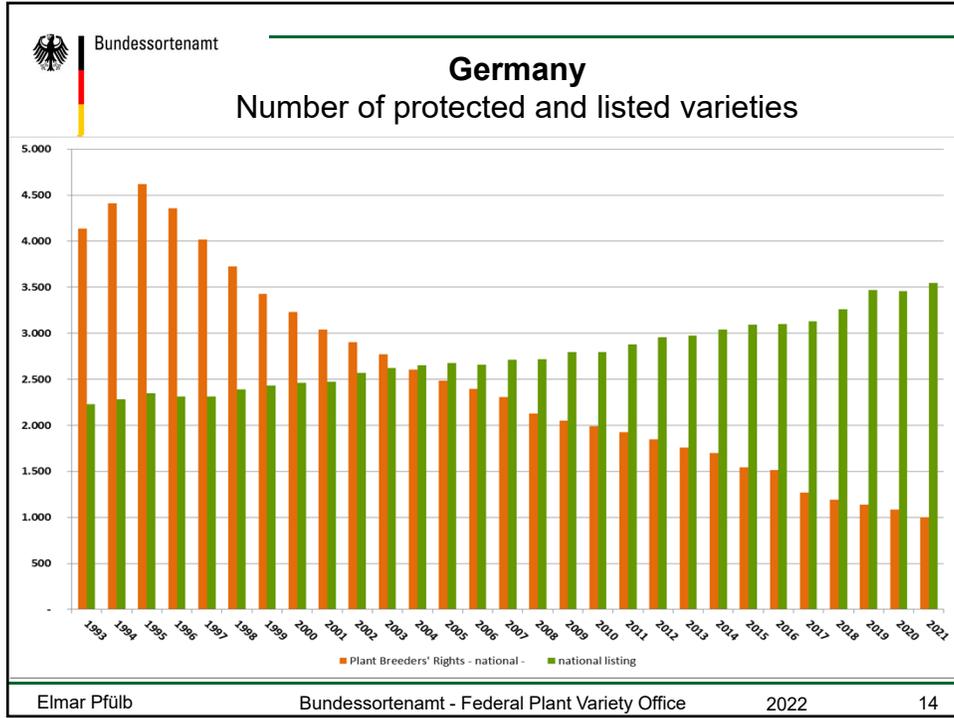
duration of trials:                      2-3 years  
trial sites:                                      15 - 25 trial stations (~12 % BSA, 88% others)

**Decision**                      10 variety commissions (3 members each)  
**Duration**                      listed for 10 years (extension is possible)

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### Test Station Hannover



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### View on Test Station



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### Test Station Hannover

<b>Size</b>	
Total area	8 ha
Arable land	2.5 ha
Greenhouse area	6000 m <sup>2</sup>
<b>Greenhouses</b>	
37 houses	from 30 to 220 m <sup>2</sup>
Cover	glass
Computer controlled	heating, ventilation, shading darkening, artificial light watering, fertilization
<b>Staff</b>	
Head	1
Permanent workers	11
Saisonal workers	9
Trainees	3

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### Units located at the Test Station

<b>Unit 212</b> DUS Testing of Ornamentals,  UPOV and CPVO Working Groups	<b>Unit 213</b> DUS Testing of Woody Ornamentals and Forrest Trees,  Performance Trials of Woody Ornamentals German Gene Bank for Ornamentals
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Seed Storage      Laboratory      IT Department  
Library, archives

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Bundessortenamt

### Unit 213: DUS Testing of Woody Ornamentals and Forreest Trees

- Responsible for the DUS testing of 95 different species
- Each year around 200 applications of varieties from 14 to 20 species are tested, e.g.
  - Roses (pot and garden varieties)
  - Calluna
  - Hebe
  - Miscanthus
  - Fargesia
  - Tree species (e.g. Acer, Carpinus, Ulmus)



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### Unit 213: Performance Trials of Woody Ornamentals

Performance trials of some woody ornamentals are done in cooperation with other partners. For example for Roses, Hydrangea, Ilex, Vinca.

Allgemeine Deutsche Rosenprüfung  **ADR**

Bundesgehölzsichtung 



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### Unit 213: German Gene Bank for Ornamentals



The gene bank for ornamentals is **coordinated** by Bundessortenamt on request of the Federal Ministry of Food and Agriculture.

Basis is the National Strategie on Biological Diversity which is based on the International Convention on Biological Diversity.

The gene bank conserves and documents plant genetic resources.  
It consists of 192 collecting and supporting partners and network coordinators.



Rudbeckia



checking seeds



seed storage

[www.bundessortenamt.de/bsa/en/plant-genetic-resources/german-gene-bank-for-ornamentals](http://www.bundessortenamt.de/bsa/en/plant-genetic-resources/german-gene-bank-for-ornamentals)



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### Unit 212: DUS Testing of Ornamentals

- Responsible for DUS-testing of bed and bedding plants, pot plants, perennials
- Each year around 300 applications of varieties from 35 to 45 species are tested, e.g.
  - Pelargonium
  - Bidens
  - Kalanchoe
  - Argyanthemum



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### DUS Trials



Osteospermum      Petunia      Calceolaria

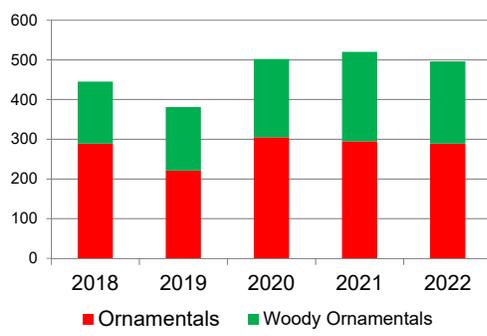
Rose      Calluna      Acer

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### Number of candidate varieties per year

(including candidates in the 2nd year)



Year	Ornamentals	Woody Ornamentals	Total
2018	280	160	440
2019	220	160	380
2020	300	200	500
2021	290	220	510
2022	280	220	500

■ Ornamentals    ■ Woody Ornamentals

In addition to the candidate varieties also similar varieties, example varieties and for some species the living reference collection is grown at the testing station. This sums up to around 3500 varieties from some 60 species.

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### Number of requests/applications and requesting authority

Authority	2018	2019	2020	2021	2022
CPVO	389	316	461	467	428
CH	20	15	4	4	19
FR	9	11	3	3	11
NL	1	4	3	7	0
BR	3	0	0	0	0
national	10	13	7	5	4
total	432	359	478	486	462

CPVO: Community Plant Variety Office



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### Main species tested





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### Main species tested

	Number of candidates per year (average 2018 – 2022)	Number of varieties in database (01.03.2022)
Rosa	95	5652
Pelargonium	47	3187
Petunia	42	1343
Calibrachoa	29	503
Kalanchoe	22	1122
Osteospermum	19	732
Calluna	17	761

For most ornamental species there is a **centralized** testing within the EU.



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### Species with living reference collection

Species	No of varieties in living reference collection
Rose	1818
Pot Rose	181
Calluna	392
Miscanthus	86
Ulmus	50
Fargesia	46



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### Guidelines

Three different types of guidelines are used:

1. National Guidelines
2. UPOV Guidelines
3. Technical Protocols of the CPVO (which are based on UPOV TG)

	Number of guidelines used	Percentage of varieties tested
National	128	15%
UPOV/CPVO	54	85%



Vallisneria



Sempervivum



Primulina

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### Workflow of DUS-test

What	When
Checking of information in the application form and the TQ	On arrival of documents
Search for similar varieties (in own database, catalogues, websites)	After closing date

#### Technical questionnaire

**Impatiens New Guinea Group**  
**New Guinea impatiens**

05 . 08 . Flower: number of colours (eye zone excluded) (19) (G) \*

1 - one Kitotoya

2 - two Kiluis

3 - three or more

05 . 09 . Flower: main colour of upper side (20) (G) \*

RHS Colour Chart (indicate reference number) Please indicate tick the appropriate

Closest 45B



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**Database with all varieties which have been tested**

Kleiner-Nr.	Blütenfarbe	Blütenform	Blütengröße	Blütenanzahl	Blütenstand	Blütenzeitpunkt	Blütenhaltbarkeit	Blütenfarbe	Blütenform	Blütengröße	Blütenanzahl	Blütenstand	Blütenzeitpunkt	Blütenhaltbarkeit	Blütenfarbe	Blütenform	Blütengröße	Blütenanzahl	Blütenstand	Blütenzeitpunkt	Blütenhaltbarkeit												
85 21 Kl	2	2	5	4	1	2	1	2	4	N074C	0063A	9	4	0061B	18,15	5	37,20	4	2,30	4	12,91	5	5,23	7	2,47	4	6,44	5	5,52	8	4,36		
00 15 Kl	7	2	7	4	1	2	6	1	2	3	1	N057C	0046B	9	6	N057A	18,00	5	36,10	5	2,50	3	15,01	7	4,24	4	3,54	8	7,01	6	5,64	7	4,56
06 16 G	3	2	6	3	1	2	6	1	2	3	2	Z155C	0062B	9	5	0067C	14,80	4	34,50	5	2,82	4	11,07	4	4,02	3	2,76	6	6,67	5	4,84	5	4,15
48 19 O	1	1	1	2	1	1	1	1	1	1	1	N078D	9	6	Z155B	17,55	5	38,10	5	2,12	3	10,37	4	4,34	5	2,39	5	6,29	5	3,99	4	3,05	
51 16 Kl	7	2	5	4	1	1	1	1	1	5	0062A	9	7	N066A	15,85	5	29,45	4	3,21	4	11,83	5	4,27	4	2,77	6	6,71	6	5,17	6	3,65		
55 15 Kl	8	2	6	3	1	1	1	1	1	8	0046B	9	4	0053B	19,50	5	39,55	6	3,86	5	12,43	5	5,03	5	2,47	5	7,42	7	6,48	9	4,84		
55 19 Kl	8	2	6	2	1	1	1	1	1	8	N045B	9	4	0053B	17,35	5	40,15	6	2,44	3	11,91	5	4,33	5	2,77	6	6,55	6	4,94	6	4,03		
99 15 Kl	8	2	7	3	1	1	1	1	1	8	0045B	9	3	0046A	19,85	6	44,75	7	3,53	4	12,91	6	4,75	5	2,72	6	7,85	7	6,19	8	4,73		
07 16 Kl	7	2	7	5	1	2	6	1	2	3	1	0048D	N030A	9	6	N057A	16,55	5	35,00	5	3,10	4	11,54	5	4,16	4	2,78	6	6,58	6	4,66	5	3,42
08 19 Kl	8	2	8	3	1	1	1	1	1	8	0045B	9	2	0046B	19,95	6	42,00	6	2,21	3	12,84	6	3,92	5	3,29	7	7,01	7	5,30	7	4,34		
53 19 Kl	1	1	1	2	1	1	1	1	1	1	Z078D	9	9	Z155C	16,40	4	38,90	5	2,51	3	12,41	5	4,81	6	2,58	5	7,25	7	5,06	7	4,06		
06 16 O	8	2	8	5	1	1	1	1	1	8	0045B	9	6	0061C	17,10	5	34,90	5	3,39	5	11,93	5	4,29	4	2,79	5	5,45	5	4,95	6	3,26		
09 15 S	3	1	2	2	1	1	1	1	1	2	N030B	9	5	0046A	19,20	4	82,55	5	1,78	2	13,32	5	5,57	4	2,40	4	5,33	4	4,77	4	2,70		
39 16 S	3	1	2	2	1	1	1	1	1	2	N030B	9	5	0046A	19,50	4	45,30	4	1,89	2	12,73	4	5,87	5	2,18	4	5,31	4	3,49	4	2,05		
40 15 S	3	1	3	2	1	1	1	1	1	2	N057A	9	6	0064B	23,85	7	62,40	7	2,34	3	13,90	5	6,10	5	2,29	4	6,53	5	4,30	4	3,07		
40 17 S	3	1	3	2	1	1	1	1	1	2	N066A	9	6	0071C	31,60	7	69,20	7	2,57	3	13,44	4	6,10	5	2,21	4	6,29	5	3,84	4	2,56		
40 18 S	3	1	2	2	1	1	1	1	1	2	N066A	9	6	0061A	36,35	7	66,45	7	1,90	3	13,87	4	5,50	4	2,53	4	5,40	5	3,62	4	2,43		
40 19 S	3	1	2	2	1	1	1	1	1	2	N066A	9	6	0061A	32,65	6	74,35	7	1,90	3	13,89	5	5,73	5	2,43	4	5,89	5	3,67	4	2,51		
40 20 S	3	1	3	2	1	1	1	1	1	2	N066A	9	6	0064B	35,45	6	70,30	6	2,01	4	11,46	5	4,62	4	2,47	4	6,61	5	4,21	5	2,78		
51 18 F	2	1	4	2	1	1	1	1	1	1	0045B	9	3	0051A	16,90	4	40,00	6	2,28	3	12,97	5	4,68	5	2,77	6	6,94	7	5,33	8	4,26		
61 15 T	6	2	4	2	1	1	1	2	2	5	0041A	0069A	9	4	0061C	18,10	5	35,50	5	3,15	4	12,26	5	5,24	6	2,35	5	6,81	6	5,95	8	4,44	

**Comparing photos**



Candidate variety



Variety from BSA database



Varieties in a catalogue



Bundessortenamt

### Workflow of DUS-test

What	When
Trial design for cultivation of varieties (candidate + similar + example var.)	After decision on which varieties are needed
Receiving of plant material	Depending on crop



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Bundessortenamt

### Arrangement of the trial

The varieties are arranged according to the grouping characteristics listed in the guideline.



In Pelargonium according to the flower colour and the leaf colour.



In Impatiens according to the main colour of the flower.

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Bundessortenamt

### Workflow of DUS-test

What	When
Observation of characteristics according to the guideline	Depending on crop



Observation by measurement or counting



Visual observation of the characteristics



Bundessortenamt

### Workflow of DUS-test

What	When
Observation of characteristics according to the guideline	Depending on crop





Bundessortenamt

### Assessment of colours

For describing the flower colours the RHS Colour Chart (Royal Horticultural Society, 2015) is used in a room facing North.



Bundessortenamt

### Taking of photos for the photo database





Bundessortenamt

### Workflow of DUS test

What	When
Checking whether the plant material fits to the description in the technical questionnaire (similar varieties: to the data in the database)	Depending on crop



Photo in the TQ



Photo of the plant material received



Bundessortenamt

### Decision on uniformity and distinctness



 Bundessortenamt

### Plants are destroyed after the decision has been taken






...or kept in the living collection

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 Bundessortenamt

### Variety description and report

After all data are in the database it is checked whether there is any similar variety in the database left which has not been included in the test.

Finally the variety description and the report are prepared.

UPOV-Sortenbeschreibung UPOV-Variety description	
1. Referenznummer der berichtenden Behörde: Reference number of reporting authority:	IM 1367
2. Referenznummer der beantragenden Behörde: Reference number of requesting authority:	20192985
3. Referenz des Züchters: Breeder's reference:	nn12-005714-001
4. Antragstellerin (Name und Adresse): Applicant (name and address):	Dürmen Group B.V. Coldenhovelaan 6 2878 PS De Lier NEDERLANDE
<hr/>	
5. Botanische Bezeichnung des Taxons: Botanical name of taxon:	Impatiens New Guinea Group
6. Landesübliche Bezeichnung des Taxons: Common name of taxon:	Neuguinea Impatiens
7. Sortenbezeichnung: Variety denomination:	-
8. Datum und Dokumentennummer der UPOV-Prüfungsrichtlinie: Date and document number of UPOV Test Guidelines:	UPOV TG/196/2 Rev. 2012-03-28
9. Datum und/oder Dokumentennummer der nationalen Prüfungsrichtlinie: Date and/or document number of national Test Guidelines:	CPVO-TP/196/3 Final 28/11/2012
10. Prüfende Behörde: Testing authority:	Bundessortenamt
11. Prüfungsstationen und -ort(e): Testing station(s) and place(s):	Hannover
12. Prüfungsperiode: Period of testing:	2020
13. Ausstellungsdatum und -ort des Dokuments: Date and place of issue of document:	06.01.2021 - Hannover

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TWO/54/6

ANNEX IV

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

Partial revision

Species	Basic Document(s)	Leading expert(s)
Rose ( <i>Rosa</i> 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) <sup>2</sup>
*Amaryllis ( <i>Hippeastrum</i> Herb.) (Revision)	TG/181/4(proj.2)	Ms. Katie Berbee (NL)	CN, JP, MX, QZ, ZA, CIOPORA, Office
Ginkgo ( <i>Ginkgo biloba</i> L.)	New	Mr. Yongqi Zheng (CN)	HU, KR, QZ, NZ, CIOPORA, Office
*Lavender ( <i>Lavandula</i> L.) (Revision)	TG/194/2(proj.2)	Ms. Laetitia Denecheau (QZ)	BG, CA, FR, GB, JP, MX, NZ, QZ, ZA, CIOPORA, Office
Lotus ( <i>Nelumbo</i> Adans.)	New	Mr. Daike Tian (CN)	JP, CIOPORA, Office
Magnolia ( <i>Magnolia</i> L.)	TG/MAGNO(proj.3)	Ms. Wang Yaling (CN)	AU, CA, FR, GB, JP, KR, NZ, QZ, CIOPORA, Office
<i>Leucanthemum</i> Mill.	New	Ms. Hilary Papworth (GB)	CA, FR, JP, QZ, ZA, CIOPORA, Office
* <i>Oxypetalum coeruleum</i> (D. Don) Decne.	TG/OXYPE_CAE (proj.1)	Ms. Mariko Ishino (JP)	NL, QZ, CIOPORA, Office
Poinsettia ( <i>Euphorbia pulcherrima</i> Willd. ex Klotzsch) (Revision)	TG/24/7(proj.1)	Ms. Laetitia Denecheau (QZ)	CA, CN, GB, JP, MX, PL, QZ, CIOPORA, Office
*Weigela ( <i>Weigela</i> 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) <sup>2</sup>
Oncidium ( <i>Oncidium</i> Sw.; x <i>Oncidesa</i> Hort.; x <i>lonocidium</i> Hort.; x <i>Zelenkocidium</i> 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)	

<sup>2</sup> for name of experts, see List of Participants.

Draft Test Guidelines to possibly be discussed in 2024

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

[End of Annex IV and of document]