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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES

Forty-Ninth Session
Gimcheon City, Republic of Korea, June 13 to 17, 2016

REVISED REPORT

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

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Opening of the session

1. The Technical Working Party for Ornamental Plants and Forest Trees (TWO) held its forty-ninth session in Gimcheon City, Republic of Korea, from June 13 to 17, 2016. The list of participants is reproduced in Annex I to this report.

2. The session was opened by Mr. Kenji Numaguchi (Japan), Chairman of the TWO, who welcomed the participants and thanked the Republic of Korea for hosting the TWO session.

3. The TWO was welcomed by Mr. Byeong Seok Oh, Director General, Korea Seed and Variety Service (KSVS). A copy of the welcome address of Mr. Oh is provided in Annex II to this report. The TWO received a presentation on Plant Variety Protection in the Republic of Korea, from Mr. Mookyung Yoon, Director of Division, KSVS, a copy of which is provided in Annex III to this report.

Adoption of the agenda

4. The TWO adopted the agenda as reproduced in document TWO/49/1 Rev.

Short reports on developments in plant variety protection

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

5. The TWO noted the information on developments in plant variety protection from members and observers provided in document TWO/49/22 Prov. The TWO noted that reports submitted to the Office of the Union after June 3, 2016, would be included in the final version of document TWO/49/22.

(b) Reports on developments within UPOV

6. The TWO received a presentation by the Office of the Union on the latest developments within UPOV, a copy of which is provided in document TWO/49/16.

Molecular Techniques

7. The TWO considered document TWO/49/2.

8. The TWO noted the developments in the Technical Working Parties (TWPs) and the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT), as set out in document TWO/49/2, paragraphs 5 to 15.

9. The TWO noted that the BMT, at its fifteenth session, held in Moscow from May 23 to 27, 2016, had been invited to develop a list of possible joint initiatives with the Organization for Economic Co-operation and Development (OECD) and the International Seed Testing Association (ISTA), including the development of a list of terminology (definitions) used by OECD, UPOV and ISTA for consideration at the Technical Committee (TC), at its fifty-third session, to be held in 2017.

10. The TWO noted that the BMT, at its fifteenth session (see document BMT/15/28 "Report", paragraphs 39 to 44) had:

- noted that the development of a joint document explaining the principal features of the systems of the OECD, UPOV and ISTA could only start after agreement by OECD and ISTA;
- noted that the development of a joint OECD/UPOV/ISTA document containing an inventory of molecular marker techniques used by crop could only start after agreement by OECD and ISTA;
- noted that OECD, ISTA and UPOV had different objectives and cooperation between the organizations in the use of molecular techniques would need to reflect that. However, the BMT agreed that it would be important to explore circumstances in which the same techniques and information could be used. In the first instance, it agreed that it would be more effective to explore such possibilities on the basis of real situations rather than at a theoretical and institutional level;
- welcomed the proposal by the Netherlands to organize a practical workshop in 2017, with support from UPOV, OECD and ISTA, to explore how molecular techniques might be applied in an efficient way for UPOV, OECD and ISTA purposes; and
- agreed that possible future collaboration between UPOV, OECD and ISTA might include the harmonization of terms and methodologies used for different crops and the possible development of standards, after the agreement by these organizations.

11. The TWO noted that a Joint OECD/UPOV/ISTA/AOSA (Association of Official Seed Analysts) Workshop on Biochemical and Molecular Methods had been held in Paris on June 8, 2016, and noted that the following recommendations of the Joint OECD/UPOV/ISTA/AOSA Workshop had been approved by the Annual Meeting of the OECD Seed Schemes, held in Paris on June 9 and 10, 2016:

- To develop a joint document explaining the principal features (e.g. DUS, variety identification, variety purity, etc.) of the systems of OECD, UPOV, AOSA and ISTA and, for mutual understanding, to repeat the joint workshop at relevant meetings of the OECD and ISTA;
- To carry out a joint inventory by UPOV, OECD, AOSA and ISTA of the use of molecular marker techniques, by crop, with a view to developing a document containing that information. The OECD will contribute to the document by sharing the ongoing list of molecular techniques used by NDAs and continuously collected by the Secretariat;
- To develop a list of terms and their definitions as used by OECD, UPOV, AOSA and ISTA and to make an attempt to harmonize these;
- To consider organizing another similar workshop in three years time; and
- To consider replacing "internationally validated" by another term such as "internationally harmonized."

The Annual Meeting endorsed the proposal of the Netherlands to organize a practical workshop in 2017, with support of the OECD, UPOV and ISTA, to explore how molecular techniques might be applied in an efficient way for UPOV, OECD and ISTA purposes.

12. The TWO noted that the TC, at its fifty-second session, had agreed a draft question and answer concerning the information on the situation in UPOV with regard to the use of molecular techniques for a wider audience, including the public in general, as set out in document TWO/49/2, paragraph 23, and that, subject to agreement by the Administrative and Legal Committee (CAJ), at its seventy-third session, and the Consultative Committee, at its ninety-second session, the draft would be presented for adoption by the Council, at its fiftieth ordinary session to be held in Geneva on October 28, 2016.

TGP documents

Matters for adoption by the Council in 2016

13. The TWO considered document TWO/49/3.

14. The TWO noted the revisions to documents TGP/7, TGP/8 and TGP/0 to be put forward for adoption by the Council at its fiftieth ordinary session, as set out in document TWO/49/3, paragraphs 6 to 13.

Future Revision of TGP Documents

15. The TWO noted that the proposals for future revisions of TGP documents to be discussed by the TWPs at their sessions in 2016 would be dealt with under separate documents.

New Proposals for Future Revisions of TGP documents

16. The TWO noted the new proposals for revision of TGP documents to be discussed by the Technical Working Party for Fruit Crops (TWF) at its forty-seventh session in 2016 on “Duration of DUS tests in the fruit sector” and “Definition of ‘recurved’”, as set out in document TWO/49/3, paragraphs 17 to 24.

TGP/7: Development of Test Guidelines

Revision of document TGP/7: Drafter’s Kit for Test Guidelines

17. The TWO considered document TWO/49/9.

18. The TWO noted the issues addressed in response to the comments by Leading and Interested Experts that had participated in the testing of the prototype of the web-based TG Template, as set out in document TWO/49/9, paragraphs 21 and 22.

19. The TWO noted that the TC had agreed the format of the Table of Characteristics in all Test Guidelines with a structure as set out in document TWO/49/9, paragraph 16.

20. The TWO noted that the TC had agreed that guidance should be developed on the order of the methods of observation for a characteristic in the Table of Characteristics to indicate that the most commonly used method was displayed first.

21. The TWO noted that the development of Version 2 of the web-based TG Template would not start before 2018, subject to availability of resources, after Version 1 would have been fully stabilized and tested.

22. The TWO noted that document TGP/7 would be revised to reflect the introduction of the web-based TG Template after Version 1 had been fully stabilized and tested.

23. The TWO noted that a demonstration of Version 1 of the web-based TG Template would be made to the TWPs at their sessions in 2016.

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

Revision of document TGP/8: Part II: Section 9: the Combined-Over-Years Uniformity Criterion (COYU)

24. The TWO considered document TWO/49/10.

25. The TWO noted that the TC, at its fifty-second session, had agreed to request members of the Union to provide larger data sets to the United Kingdom for developing probability levels for the new method that

would match results obtained using the previous probability levels, as set out in document TWO/49/10, paragraph 20.

26. The TWO noted that the Office of the Union had issued UPOV Circular E-16/098 to invite UPOV members' experts to provide to the United Kingdom, by May 27, 2016, data sets including at least 100 candidate varieties, with a possibility that data for those 100 varieties could be derived from several years.

27. The TWO noted the report by an expert of the United Kingdom on the results and further progress, including contribution of data sets, made at the thirty-fourth session of the Technical Working Party on Automation and Computer Programs (TWC).

28. The TWO noted that COYU was not commonly used for DUS examination of ornamental plants.

Revision of document TGP/8: Part II: New Section: Examining DUS in Bulk Samples

29. The TWO considered document TWO/49/11.

30. The TWO noted the proposed guidance for examining DUS in bulk samples as presented in the Annex to document TWO/49/11, for inclusion in a future revision of document TGP/8.

31. The TWO considered the proposed approach to assess uniformity of individual plants for different varieties to validate the characteristic before being used in DUS examination and agreed that for vegetatively propagated ornamental plants the number of applications per crop would not be sufficient to provide over-years data from many varieties.

32. The TWO noted the reports from members on experiences with assessing chemical component characteristics and agreed on the technical difficulty and cost implications to obtain a sufficient quantity of certain chemical components to assess uniformity on individual plants.

33. The TWO agreed that characteristics assessed on the basis of bulk samples could provide complementary information for the analysis of distinctness in direct comparison of pairs of varieties for certain crops and agreed that the future guidance should set parameters for selecting among the approaches listed in the Annex to document TWO/49/11.

Revision of document TGP/8: Part II: New Section: Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions

34. The TWO considered document TWO/49/12.

35. The TWO noted the developments reported in document TWO/49/12.

36. The TWO noted that the expert from the United Kingdom in the practical exercise to determine the aspects in common and divergence among methods had provided information to the TWC on the reasons and situations in which example varieties, crop expert judgement and equal-spaced states would/would not be appropriate for transforming observations into notes.

TGP/10: Examining Uniformity

Revision of document TGP/10: New Section: Assessing uniformity by off-types on basis of more than one growing cycle or on the basis of sub-samples

37. The TWO considered document TWO/49/13.

38. The TWO noted that the Technical Working Party for Agricultural Crops (TWA) had agreed to request a video link with the experts from the TWC to discuss the new proposed "Approach 3: Combining the results of two growing cycles" at its forty-fifth session, to be held in 2016.

39. The TWO considered the draft guidance as presented in Annex I of document TWO/49/13 and agreed that the term "clear" should be clarified in the sentence: "Furthermore, on the basis of a clear lack of uniformity, a variety may be rejected after a single growing cycle". The TWO agreed to propose that the sentence in approaches 1 and 2 should read as follows:

"Furthermore, if a variety exceeds in the first growing cycle the allowed number of off-types in two growing cycles, the variety may be rejected after a single growing cycle."

40. The TWO agreed that it should be clarified in the draft guidance whether there was an assumption of assessing two growing cycles using plant material from a single submission by the breeder (e.g. seeds from the same seed lot).

Program for the development of TGP documents

41. The TWO noted the program for the development of TGP documents, as set out in Annex III to document TWO/49/3.

Guidance for drafters of Test Guidelines

42. The TWO received a presentation by the Office of the Union on the tutorials for the following different user roles of the web-based Test Guidelines template:

- Leading Expert drafting tutorial
- Interested Expert comments tutorial
- Leading Expert checking tutorial.

43. The TWO noted that a copy of the tutorials was reproduced in the Annex to document TWO/49/17.

44. The TWO agreed that the tutorials should continue to be developed to include additional comments received from users of the web-based TG template. The TWO agreed that the tutorials should be made available on the TG drafter's web page and a link provided in the web-based TG template webpage.

45. The TWO welcomed Version 1 of the web-based TG template and proposed that the following issues should be addressed:

- to allow immediate visualization of updates made by the Leading Expert in the export file;
- to improve availability online of the tutorials (e.g. link on TG drafter's web page and web-based TG template);
- to open the Test Guidelines for drafting by Leading Experts as soon as possible after a TWP session;
- to add a shortcut to the print dialog box;
- to enable editing of a comment by an Interested Expert without replacing the text previously drafted;
- to generate a confirmation message when a comment by an Interested Expert had been successfully introduced;
- to improve formatting in TQ 5 to clarify that the applicant has an option to either fill in the RHS Colour Chart number or select to the appropriate color group from the list of color groups in a color characteristics;
- to adjust the standard wording for plant material supplied in the form of corms: "The material is to be supplied in the form of corms able to produce plants to show all the characteristics in the first year of examination."

46. The TWO noted that further comments by users of the web-based TG Template could be sent to the Office of the Union.

Matters concerning variety descriptions

47. The TWO considered documents TWO/49/14 and TWO/49/14 Add.

48. The TWO noted the purpose of the variety description developed at the time of the granting of the breeder's right (original variety description), and the status of the original variety description in relation to the verification of the conformity of plant material to a protected variety for enforcement of the breeder's right, as set out in document TWO/49/14, paragraph 28.

49. The TWO noted the presentations on "Matters concerning variety descriptions" received by the TWPs, at their sessions in 2015, as set out in document TWO/49/14, paragraph 7.

50. The TWO noted the comments by the TWPs, at their sessions in 2015, on matters concerning variety descriptions and the role of plant material used as the basis for the DUS examination, as set out in document TWO/49/14, paragraphs 8 to 26.

51. The TWO noted the following presentations made by experts on their experiences with regard to the role of plant material used as the basis for the DUS examination in relation to matters presented in document TWO/49/14, paragraph 31 (in alphabetical order):

Australia	Role and functions of variety descriptions in Australia
European Union	Updating Variety Descriptions - Outcome of the Survey -
Germany	The Role of Plant Material Used As Basis For The DUS Examination

52. The TWO noted that the presentations by the experts from the European Union and from Germany were available as Annexes I and II to document TWO/49/14 Add. The TWO noted that the presentation by the expert from Australia would be made available as document TWO/49/14 Add.2.

Number of growing cycles in DUS examination

53. The TWO considered documents TWO/49/15 and TWO/49/15 Add.

54. The TWO noted that the TC, at its fifty-second session, had agreed to invite members of the Union to simulate the impact of using different numbers of growing cycles on DUS decisions using actual data and to report on their results at the TWP sessions in 2016 and at the fifty-third session of the TC.

55. The TWO received a presentation by an expert from Germany, as reproduced in the Annex to document TWO/49/15 Add. The TWO noted the results of the simulation on the impact of using two growing cycles on DUS decisions using actual data for vegetatively propagated ornamental varieties and noted that decisions did not differ from those taken after one growing cycle.

56. The TWO noted the conclusion that a variety description was linked to the circumstances of the DUS examination, for example because the observed notes for some quantitative characteristics could fluctuate between growing cycles. The TWO agreed that for vegetatively propagated ornamental varieties DUS examination was usually based on side-by-side comparison between candidate and most similar varieties facilitating decisions on DUS after a single growing cycle.

Definition of color groups from RHS Colour Charts

57. The TWO considered document TWO/49/20.

58. The TWO considered the color names used in the Sixth Edition of the RHS Colour Chart and agreed they did not always reflect the color similarity among different patches. The TWO noted that similar colors in the RHS Colour Chart were grouped under the same UPOV color group and agreed that the current UPOV system was more suitable for variety description purposes.

59. The TWO considered the terms used in color names of the Sixth Edition of the RHS Colour Chart and agreed they were not suitable for use in DUS examination and producing variety descriptions (e.g. “pale”, “moderate”, “vivid”, “brilliant”, “deep”, “strong”).

60. The TWO noted that some charts of the 1986 Edition and later versions of the RHS Colour Chart had different colors than the same charts in the Sixth Edition and agreed to use the Sixth Edition as the basis to create a new revised list to replace the current UPOV Color Groups, as presented in document TGP/14 “Glossary of terms used in UPOV documents.”

61. The TWO considered whether the UPOV color groups for the RHS Colour Charts could be used for grouping of varieties and organization of the growing trial and agreed that the difference between UPOV color groups was smaller than would be appropriate for excluding varieties from comparison in a growing trial. The TWO agreed that the color groups created for grouping varieties and organizing a growing trial required a very clear and large difference between colors.

62. The TWO agreed to request the expert from Germany with support by the experts from Australia, Canada, European Union, the Netherlands, New Zealand and the United Kingdom to draft guidance on the

factors to be considered for creating color groups for grouping of varieties and organizing the growing trial (e.g. knowledge on the range of variation within the species and necessary difference between colors for varieties to be considered clearly distinct).

Experience with the RHS Colour Chart and possible future addition of colors

63. The TWO received an oral report by the expert from the United Kingdom on the process to organize the compilation of examples of varieties without a matching color in the Sixth Edition of the RHS Colour Chart (gaps). The examples compiled would be submitted to the RHS with a view to propose new colors and possible harmonization on terminology for the Seventy Edition of the RHS Colour Chart. The TWO agreed to request the expert from the United Kingdom to report on developments to the TWO at its fiftieth session.

Variety denominations

64. The TWO considered document TWO/49/4.

65. The TWO noted the work on the possible development of a UPOV similarity search tool for variety denomination purposes by the Working Group for the Development of a UPOV Denomination Similarity Search Tool (WG-DST), as set out in document TWO/49/4, paragraphs 5 to 13.

66. The TWO noted that a revision of document UPOV/INF/12/4 (document UPOV/INF/12/5), in relation to changes of registered variety denominations, had been adopted by the Council, at its forty-ninth ordinary session (see document TWO/49/4, paragraph 14).

67. The TWO noted that the mandate and the composition of the WG-DST had been expanded to prepare recommendations for the CAJ concerning a possible revision of document UPOV/INF/12 and that it had become the Working Group on Variety Denominations (WG-DEN).

68. The TWO noted that the first meeting of the WG-DEN had been held in Geneva, on March 18, 2016.

Uniformity assessment

69. The TWO noted that document TWO/49/13 “Assessing uniformity by off-types on basis of more than one growing cycle or on the basis of sub-samples” had been discussed under agenda item 5 “TGP documents” as set out in paragraphs 37 to 40 of this Report.

Creation of illustrations for Test Guidelines

70. The TWO received a presentation by an expert from the Republic of Korea on the “Creation of illustrations for Test Guidelines”, a copy of which is reproduced in document TWO/49/23. The TWO noted the use of Microsoft Power Point for creating illustrations of botanical structures used as explanations for characteristics in Test Guidelines, and received a demonstration on creating illustrations for plant growth habit, leaf shapes and flower structures. The TWO welcomed the demonstration and agreed that the method could be used for drafting illustrations to UPOV Test Guidelines.

Proposal to the “Guide to the UPOV Code System” on the Principal Botanical Name for Inter-generic and Interspecific Hybrids

71. The TWO considered document TWO/49/18, prepared by an expert from the European Union.

72. The TWO noted that the TC, at its fifty-second session, had agreed to invite the European Union to make a proposal to the TWPs, at their sessions in 2016, for a revision of the Guide to the UPOV Code System with regard to UPOV codes for hybrid genera and species.

73. The TWO considered the proposal to present the principal botanical name for UPOV Codes of hybrid genera and species indicating the parents in alphabetical order. The TWO noted the existence of different procedures among members and noted that in some members the information on parents of a hybrid ornamental variety were only published when confirmed and indicating the female parent first. The TWO

noted that in one member the information on parents of a hybrid ornamental variety were published according to the information provided by the applicant.

Experiences with new types and species

74. An expert from Japan reported on applications for plant variety protection of new varieties of *Lysimachia clethroides* and *L. barystachys* and *Stemona japonica.*

Matters to be resolved concerning Test Guidelines adopted by the Technical Committee

75. The TWO considered documents TWO/49/24 and TG/SALVI(proj.5).

76. The TWO agreed that the Test Guidelines for Salvia be adopted with VG/MS/MG indicated as methods of observation for characteristics 23, 24, 29, 31, 34, 35, 36 and 41.

Discussion on draft Test Guidelines (Subgroups)

*Abelia (*Abelia *R.Br.)*

77. The subgroup discussed document TG/ABELI(proj.4), presented by Mr. Pascal Coquin and Mr. Bernard le Pautremat (France) on behalf of Ms. Françoise Jourdan (France), and agreed the following:

4.2.2	to read: "… 1 off-type is allowed…"
5.3(d) to (g)	to add group numbers to all color groups ("Gr. 1: …", "Gr. 2: …")
5.3(f)	color group "greenish" to be placed as Group 1
5.3(g)	to delete repeated group "pink"
Char. 1 to 4	to add a label to explain time of assessment as "to be observed just before flowering"
Char. 2	to check variety denomination "Golden Panache" (to be replaced in case "Golden Panache" is a commercial name)
Char. 5	– to add (b) – to add example varieties
Char. 7	to remove (+)
Char. 10	to add (+) and illustration
Char. 11	to add (d)
Char. 12	to delete "…on upper side" from header and add to explanation in Add. 12
Char. 14	to add (f)
Char. 15	to add example varieties
Char. 16	to add state "none" and to be indicated as PQ
Char. 19	– to have states "absent or weak", "medium" and "strong" and to be indicated as QN – to check whether illustration to be provided for state "medium"
Char. 20	– to check whether to add example varieties – to delete state (1) "pinkish white" – to move state "greenish" to note (1)
Char. 20 to 22	to add a label and explanation to read: "to be observed at time of full flowering"
Char. 23	– to be moved as the first flower characteristic (before Char. 20) – to delete (a) – to add (+) and explanation "to be observed just before opening of the bud"
Char. 24	to add example varieties
Char. 25, 26	– to add (+) and explanation using illustration from 8.1(g) – to delete (g)
Char. 27, 28	to add (e)

Char. 36	– to check whether to delete "(0)" – to add (+) and explanation to read "The number of flowers should be observed as the number of flowers open at the same time on the plant, at the time of full flowering." – to have states from "very weak" to "very strong"
8.1(b)	to read "Observations on shoots and leaves should be made on current year shoots."
8.1(c)	to read "Observations should be made on fully expanded leaves."
8.1(d)	to display grid lines
8.1(f)	to use standard wording for secondary color and to check which is the second color in case too similar with tertiary.
8.1(h)	to delete text and retain illustration
Ad. 35	to read: "… inflorescences with open flowers."
9	to read: "RHS Good Plant Guide (1998). London, Dorling Kindersley. N.B., RHS Plant Finder 2000-2001 CD-ROM.""
TQ 5.7 (20)	color group "greenish" to be placed as Group one
TQ 5.8 (27)	state 3 to read "violet" (delete "pink")

Aglaonema (Aglaonema *Schott.*)

78. The subgroup discussed document TG/AGLAO(proj.7), presented by Mr. Kenji Numaguchi (Japan), and agreed the following:

5.3(c), (d)	to correct formatting
Char. 4	states of expression to read "strongly curved" with example variety Katharngen, "weakly curved", "squared" with example variety Supmongkon, "weakly pointed" and "strongly pointed" with example variety Saisamorn (notes 1 – 5)
Char. 18	to read "Leaf blade: color 1: size of blotches"
Char. 21	state 7 to read "throughout"
Char. 23	to read "Leaf blade: color 2: size of blotches"
Char. 28	to read "Leaf blade: color 3: size of blotches"
Char. 30	to add space between "blade:" and "color"
Char. 33	to read "Leaf blade: color 4: size of blotches"
Char. 35 to 48	to read "… on lower side" (to replace "of" with "on")
Char. 46	state 10 to read "throughout"
Char. 55	– to read "Leaf blade: profile of midrib" – state 2 to read "level"
8.1(f)	to update number of characteristics in Example two (42 to 50 to read 30 to 34)
8.1(h)	to improve visibility of text to delete drawings and keep photographs
8.1(i)	to adjust positioning of arrow in state (2) to show grey green blotches
TQ 7.3	to move color groups to TQ 5 (template issue)

*Alstroemeria (*Alstroemeria *L.) (Revision)*

79. The subgroup discussed document TG/29/8(proj.1), presented by Mr. Henk de Greef (Netherlands), and agreed the following:

1.	to read "These Test Guidelines apply to all vegetatively propagated varieties of *Alstroemeria* L."
3.4	to read "… at least 10 plants."
5.3(b)	to replace "upper side" with "inner side"
T.o.C.	general remark: to add example varieties

Char. 3	to check whether to add new characteristic to read “Stem: anthocyanin coloration” with states “absent” and “present”
Char. 7	– to add (+) and illustration of inner side of leaf – to replace “upper side” with “inner side”
Char. 8	– to add (+) and explanation – to check whether to add new characteristic to indicate the number of colors of inner side
Char. 11	– to check whether to have an asymmetric scale with 3 or 5 states (state “medium” to have the middle note) – LE to check whether characteristic is reliable
Char. 13	to check whether to be deleted and to find another way to incorporate it for grouping and TQ
Char. 14, 15	to read “… in frontal view”
Char. 16	– to have states “low” to “high” – to add (+) and illustration
Char. 17	– to have states “short” to “long” – to add (+) and illustration – to read “Flower: length in side view”
Char. 19	to check whether to have 5 states instead of 3
Char. 20	– to check whether to add (+) and illustration – to replace “lower side” with “outer side”
Char. 21 to 26, 28 to 32	to replace “upper side” with “inner side”
Char. 25	– to be indicated as QN and to have states few(1), medium(2), many(3) – to check whether to add (+) and illustrations – to read “Outer tepal: small stripes on marginal part of lateral zone of inner side”
Char. 26	to read “Outer tepal: number of large stripes on inner side (marginal zone excluded)”
Char. 27	to read “Inner tepal: shape”
Char. 28	to add (+) and illustrations
Char. 29, 30	to check whether to add (+) and explanation
Char. 31	– to add (+) and explanation – to check whether to have 5 states instead of 3
Char. 34	– to read “Anther: color” – to add (+) and explanation on time of assessment
Char. 36	to be indicated as QN and to have states absent(1), few(2), many(3)
8.1	– to add an illustration to indicate all the flower parts – to add an illustration of the tepal to indicate the zones
8.1(a)	to check where observation should be made (which part of the stem)
8.1(b)	to read “All observations on the flower should be made at the time of dehiscence of first anthers in an individual flower.
8.1(c)	Observation on rays and pedicel should be made at time of opening of the first flower on the umbel ray
Ad. 9	to replace “branch” with “ray” in diagram
Ad. 14, Ad. 15	to read “… in frontal view”
Ad. 18	to display in grid
Ad. 20 to 24	– to be moved to chapter 8.1 – to replace “upper side” with “inner side”
Ad. 27	to improve illustrations
Ad. 35	to be moved to chapter 8.1
Ad. 39	to check whether to improve explanation (states “distal end” and “distal half” seem along edges)

9.	to replace “Stuttgard” with “Stuttgart”
TQ 1.1	to check whether possible to add a second box to read “Alstroemeria L. and its hybrids”

Calendula (*Calendula L.*)

80. The subgroup discussed document TG/CALEN(proj.1), presented by Mr. Kentaro Sekizawa (Japan), and agreed the following:

General	to replace “outer” with “lower” to replace “inner” with “upper”
Cover page	– to check whether to add common names in other languages – to add German name “Ringelblume”
2.3	– to read “…30 plants” – to read “… 15 rooted cuttings”
3.4	to read “… at least 30 plants for seed propagated varieties, or 15 plants for vegetatively propagated varieties.”
4.2.4	– to read “… In the case of a sample size of 15 plants, 1 off-type is allowed.” – to check whether the seed propagated varieties are self- or cross-pollinated and to delete paragraph on hybrid varieties
5.3(c)	to check whether group 2 to read “medium and dark yellow”
5.3(e)	to list color groups
T.o.C.	– to check whether to specify the time of observation of characteristics – to check whether to select (*) characteristics – general comment on three methods of observation: to check whether to propose the method of observation used by the Leading Expert or by the other Interested Experts (e.g. Char. 2, 3, 4, 6, 7, 8, 14, 15, 17, etc.) – to add example varieties
Char. 1	to check whether to add state (4) “drooping”
Char. 1, 16, 25, 30, 32	to add (*)
Char. 4	to add (+) and explanation on which stem to be observed
Char. 5	to be deleted
Char. 6	to use scale of 5 notes (short = 1)
Char. 9	– to check whether to be replaced with “position of broadest part” and “ratio” – to check whether to combine states oblong and ovate into a single state “ovate”
Char. 12	to be deleted
Char. 13	– to be indicated as QN – to add (+) and explanation from current Char. 12 – to check whether to read “Inflorescence: position of main flower head in relation to secondary flower heads” (to check wording with Test Guidelines for similar species) – states to read: “above”, “same level” and “below”
Char. 14	to check whether to add (+) and explanation on how to assess characteristic
Char. 15	to clarify whether the characteristic refers to the proportion in relation to the total diameter of flower head
Char. 16	to add (*)
Char. 17	– to check whether to add (+) and explanation – to read “Inflorescence: number of flower heads” – to be moved along with other inflorescence characteristics
Char. 19	to check whether different than Char. 16
Char. 20	– to check whether to add (+) and illustrations – to be indicated as QN – to replace “Flower head” with “Ray floret”
Char. 23	to add illustrations to explain low and high ratios

Char. 24	– to read “Ray floret: number of colors of upper side” – to replace “inner” with “upper” throughout the draft TG – to check whether to delete this characteristic
Char. 25	to add (*)
Char. 26	to check whether to add “Ray floret: distribution of secondary color” “at base” “throughout” “at apex”
Char. 30	to add (*)
Char. 32	– to read “Disc: color” – to add (*) – to add (+) and explanation on time of observation in chapter 8.2 (before anther dehiscence)
8.1	“Observations on the plant, leaf and flower should be made on a fresh, fully open flower head.”
Ad. 6	to read “Observations should be made on the middle internode of the longest stem”
Ad. 10	to check whether to improve photographs
Ad. 25	– to use standard sentence for explanation on main and secondary color – to improve illustration – to delete mention to groups
Ad. 33	to read “Time of flowering is when 50% of the plants have open terminal flower heads.”
8.3	to be moved to beginning of 8.1
TQ 5.4	to add example varieties
TQ 6	to add example

*Coleus (*Plectranthus scutellarioides *(L.) R. Br.)*

81. The subgroup discussed document TG/SOLEN_SCU(proj.2), presented by Mr. Takayuki Mikuni (Japan), and agreed the following:

2.3	to separate the two sentences, i.e. to add “;” after “30 plants” (template formatting)
4.1.4	to read “seed-propagated” and “vegetatively propagated” (lower case)
4.2.3	template formatting issue (to read “… 1 off-type is allowed.”)
5.3 (a), (b)	to replace “greatest” with “largest”
T.o.C.	general remark: to check the references to explanations in Chapter 8.1 (a to g) as many seem to have been misplaced (possible template error?)
Char. 1	to add new state “trailing” (4) with example variety
Char. 2, 3, 5, 6, 7	to check whether to add example varieties
Char. 5, 7	to write “Balaublach” (lower case)
Char. 6 to 10	to delete (d) and add (b)
Char. 9	to check whether to split into two characteristics “shape of apex” and “length of differentiated tip”
Char. 10	state 1 to read “acute”
Char. 12, 20, 24, 32	to check whether to add new state “between veins” after state 1
Char. 25	to delete state 3 “irregular”
Char. 36	to check whether to have 3 or 5 states of expression (to have state “medium” at middle and a symmetric QN scale) (e.g. to add state “very strong”)
8.1 (b)	to read “Observations on the leaf should be made on the upper side of fully expanded leaves from the middle third of the stem, unless otherwise specified.”
8.1 (d)	to correct paragraph formatting
9.	– to add space between “Horticulture” and “Volume” – to check whether to write “Coleus-Rainbow Foliage..” (with hyphen)

TQ 5	to add current characteristics in TQ 5 as grouping characteristics
TQ 5.2, 5.3	to have all 9 states
TQ 7.3	to move color groups to TQ 5 (template issue?)

**Freesia (*Freesia *Eckl. ex Klatt) (Revision)*

82. The subgroup discussed document TG/27/7(proj.3), presented by Ms. Katie Pont (Netherlands), and agreed the following:

1.	to add sentence “These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation the recommendations in the General Introduction and document TGP/13 ‘Guidance for new types and species’ should be followed.”
2.2.	– to delete comma between “corms” and “able” – to read “… able to produce plants to show all …”
Char. 2 to 5	to delete “blade”
Char. 8	to add example varieties or to explain how many branches for each of the states of expression
Char. 20	to add (a)
Char. 26, 38, 39, 45	to add example varieties
Char. 30	to explain “the ventral part” of inner side
Char. 37, 45	to read “Perianth: distribution of secondary color of inner side of outer segment” with states “at base”, “flushed” and “along veins”
Char. 39	to check whether to add (d)
Char. 40, 41	to add (d)
Char. 45	– to check whether to add example varieties – to read “Perianth: distribution of secondary…” – to have same states of expression as Char. 37 – to add (+) and illustration using same as Ad. 37
Char. 46	to read “Perianth: area of secondary color at base of inner side of inner segment”
8.1(a)	– to read: “Observations on plant, leaf, peduncle…” – to add full stops at end of all sentences in 8.1. (template issue)
8.1(b)	to read: “Observations on leaves should be made on the longest fully expanded leaves.”
8.1(e)	– to correct spelling of “tertiary” – end of sentence to read “…, the darker color is considered to be the secondary color.”
8.1(g)	to read “Observations on filament, anther, style and stigma should be made on single and semi-double flowers.”
Ad. 1	to increase font of legend
Ad. 13, 14	to increase thickness of arrows
Ad. 15	to check whether to use same scale as in Char. 15 (1 to 3)
Ad. 19	– to check whether to use petals or tepals – to spell “semi-double” with hyphen – to add full stop at end of sentence – to read: “semi-double flowers have between 7 and 9 petals. Double flowers have more than 9 petals.”
Ad. 40	to align legend with illustration
Ad. 51	to improve indication of length in state (1) “short”
Ad. 52	to improve illustration for state (1) “fine”
Ad. 53	to capitalize first letter of sentence
9	to delete full stop between “page” and “233” in first reference

TQ 4.2	to add option for “seed propagated varieties”
TQ 5	to add color groups in 5.4 and 5.5 (same as in Section 5.3 – grouping characteristics)

*Gazania (*Gazania Gaertn*.)*

83. The subgroup discussed document TG/GAZAN(proj.1), presented by Ms. Elizabeth Scott (United Kingdom) on behalf of Mr. Adriaan de Villiers (South Africa), and agreed the following:

General	to read “seed-propagated” (with dash)
Cover page	LE to check whether English common name “Treasure Flower” is correct for the whole genus or only certain species
4.1.4	to replace selection of standard wording for “fruit bodies” with “plants”
4.2.2	to read “… for seed-propagated …”
4.2.3	– to standardize wording for the whole section – to include standard wording for vegetatively propagated varieties – to include new wording “these guidelines have been primarily developed … (see TGP/7/xx draft)
5.3	to review grouping characteristics once the characteristics are finalized
T.o.C.	– to add example varieties – general: to consider the presentation of all the quantitative characters with respect to the number of states; in general 5 states are anticipated with standardized wording – general: to check color characteristics for overall consistency with the Lisbon approach
Char. 1	to check whether to be indicated as “QN”
Char. 4	– to read: “Plant: leaf lobing” – state 1 to read “absent or weak”
Char. 5	to add “MG”
Char. 6	to add “MG”
Char. 7	to add (+) and use 8.1(b) as note specific to this character and Char. 48 to avoid confusion with Lisbon approach used for flower characters
Char. 8	state 1 to read “none”
Char. 9	to be indicated as PQ
Char. 10	to check whether to be deleted. If not, to reconsider the presentation (wording)
Char. 11	to check whether state 1 to read “absent or weak”
Char. 17	to add (+) and use same illustration in Ad. 16
Char. 19	to add (+) and diagram
Char. 20	to add “MG”
Char. 21	to check whether to reduce to 5 states
Char. 23	to add (+) and illustrations to explain low and high ratio
Char. 24	to check whether to be deleted as it conflicts with Lisbon approach in character 26 et seq.
Char. 25	to be deleted as it conflicts with Lisbon approach in character 26 et seq. (detailed description ahead)
Char. 26	to delete (+)
Char. 27, 30, 33, 36	– to add (+) – to check whether further distribution necessary and to indicate whether eye-marking is covered by one of these states and, if not, whether to add it – to review description of the states for consistency with other TGs
Char. 28, 31, 34, 37	to check whether characteristics are necessary given the precision of Char. 27, 30, 33, 36
Char. 38.	to check for possible correlations between 38-39 and consider reducing the number of states

Char. 39, 40	to check whether characteristics are necessary
Char. 41	– to review number of states – to check the wording of states
Char. 43, 44	to check whether to be moved before char. 46 to avoid confusion with color descriptions, if not included in the list of distributions
Char. 44	– to check whether the use of “other” is appropriate – to check whether “other” should be deleted and the characteristic to be indicated as “QL”
Char. 47	to check whether to add (+) and illustrations
Char. 48	to add (+) and use 8.1(b) as note
8.1(b)	– to move 8.1(b) to a note for char. 7 and char. 48 to move 8.1(b) to a note for char. 7 and char. 48 to move 8.1(b) to a note for char. 7 and char. 48 to move to a note for Char. 7 and 48
8.1(d)	– to be reworded so that information “In using this approach the eye spot is not included” comes first – to check whether to be split into two notes (e.g. (d(i) and (d(ii))
8.1(e)	– to make diagram more prominent and to include some photographs – to clarify difference between “basal zone” and color distribution “at base” by means of photos
Ad. 1	to improve illustrations
Ad. 25	to be deleted
Ad. 26	– to read “Ad. 27: …”, “Ad. 30:…”, “Ad. 33:…” and “Ad. 36:…” – to check whether to provide further explanation on difference between states (4) “middle 1/3” and (14) “transverse zone”
Ad. 38, 39, 41	to modify as per character
TQ 5.9	group needs to be developed
7.3	to check whether TG-template issue: wording of 7.3 should be in appropriate place within chapter 5 of TQ

**Grevillea* (Grevillea *R. Br. Corr. R. Br.*)

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

3.4.2	to replace “fruit bodies” with “plants”
4.1.4	– to replace with standard wording for “plants” and specify whether vegetatively propagated – to provide the number of plants to be observed (9 plants) – to search document to replace all mentions to “fruit bodies” by “plants”
4.2	to be completed according to previous proj. 4 (95%, 1%, 1 off-type)
6.5	to move definitions of divided leaf, lobe and sinus to Chapter 8
T.o.C.	general remark: to revise the approach to specify which characteristic apply to each type of leaf (e.g. headers of characteristics)
Char. 2	to add example varieties
Char. 6 to 8	to be observed on all leaf types
Char. 10	– to read “leaf: type” – to check whether to be combined with Char. 12 – to be moved before Char. 6
Char. 12	to be moved after Char. 10 (entire/divided)
Char. 13	to check states of expression for all example varieties
Char. 20	template formatting error to be checked
Char. 21	to add explanation “ excluding secondary and tertiary types”

Char. 23	to check whether example varieties for states of expression “dark green” and “red green” exist or to be deleted
Char. 30	to add state (5) “very strong”
Char. 31	– template formatting error – to confirm example varieties correspond to appropriate states of expression – to correct notes (example varieties match states of expression)
Char. 32	– template formatting error – to have scale of notes (3) (5) and (7) – to correct notes (example varieties match states of expression)
Char. 33	to add explanation that “irregular” is a loose asymmetrical inflorescence
Char. 34	to re-order to have state “synchronous” as note 2
Char. 35, 42, 50, 56, 59, 62	– to check whether to add example varieties (e.g. state of expression “black”) – state “black” to be deleted
Char. 39	to add space to read “…towards the base”
Char. 40	to include state of expression “very long”
Char. 46	to include state “very strong”(5) and no example variety
Char. 51	to add state “very strong”(5) and no example variety
Char. 52	state “black” to be deleted
Char. 53	– to be indicated as PQ – state (3) to read “sharply curved”
8.1(c)	to improve positioning of labels “d” and “e” (lobe length and width)
8.1(d)	– to include illustration for secondary and tertiary leaves – to delete: “Observed on varieties with absent or primary division of leaves only”
Ad. 6	to be deleted
Ad. 11	to check whether to improve formatting of grid (delete extra column, standard headers) and position text explanation on top
Ad. 12	to check whether to be deleted
Ad. 21	– to add explanation – to be observed on entire and primary types only
Ad. 48	to be combined with Ad. 49
8.3	to be moved to chapter 8.1
9	to delete “Elliot and Jones”
TQ 4	to select from standard wording options
TQ 6	– to be completed – to have example: “ Plant habit:” with states “upright” and “spreading

*Guzmania (*Guzmania *Ruiz et Pav.) (Revision)*

85. The subgroup discussed document TG/182/4(proj.2), presented by Mr. Henk de Greef (Netherlands), and agreed the following:

General	to read “seed-propagated” with hyphen (template issue?)
2.2	to delete from: “ca.” until end of sentence
3.4.1	to read: “Each test should be designed to result in a total of: for vegetatively propagated varieties, at least 20 plants; for seed-propagated varieties, at least 40 plants.” (template formatting issue)
4.1.4	– to read “… to be examined” (lower case, template formatting issue?) – to check whether to reduce number of parts taken from a single plant from 20 or to delete the paragraph – to delete second paragraph “In the case of observations of parts taken…”
4.2.2	– to check whether to clarify whether self-pollinated seed propagated varieties – to check whether to indicate that for 40 plants 2 off-types are allowed

4.2.3	to read "… 2 off-types are allowed."
5.3	to add "(d) Floral bract: main color of outer side" characteristic 30 and update numbering
T.o.C.	– general: to check whether the methods of observation indicated are used by the Leading Expert or the Interested Experts – general: to add example varieties
Char. 2	states 1 and 3 to read "narrow" and "broad"
Char. 9	– to delete (+) and Ad. 9 (covered by (d)) – to check whether to add "red" variation"
Char. 9 to 11	to check whether to read "... of inner side"
Char. 10	to read "variegation"
Char. 11	to check whether to specify part of the leaf to be observed (base?) (pattern? area?)
Char. 12 to 14	to check whether to read "... of outer side"
Char. 15	to check whether to add (+) and explanation
Char. 19 to 21	to be indicated as "VS"
Char. 24	to add (+) and explanation on how to establish the length
Char. 22	state 1 to read "below the tip of the leaf" and check the wording
Char. 25	to add (+) and explanation on how to establish the diameter
Char. 26, 36, 37, 39	to add (+) and explanation
Char. 27	to delete (c)
Char. 27 to 29	to add (+) and explanation on which floral bract
Char. 28 to 33, 42	to add (e)
Char. 29	to read: "width of apex" (all angles in Ad. 29 are acute)
Char. 33	to check whether to be indicated as VG
Char. 34	to read "curvature of longitudinal axis"
Char. 35	to check whether to add new char. to read "Floral bract: flowers" with states "one" (1), "more than one" (2)
Char. 40, 41	to be indicated as "VS"
Char. 42	to read "Stigma: color"
8.1(a)	to read "Observations on plant, leaf, inflorescence, peduncle and floral bracts should be made when the flowers in the middle third of the flowering part are open."
8.1(d)	to replace "darkest" with "darker"
Ad. 19	to add photographs
Ad. 23	to increase size of legend
Ad. 34	state "strongly recurved" to be indicated as note (4)
9	– to complete number of pages – to replace "England" with "United Kingdom"
TQ 1.	to have a box to indicate the species (template issue?)
TQ 4.2	to add option for seed propagation
TQ 5.1, 5.6	to have 9 states

*Hardy Geranium (*Geranium *L.)*

86. The subgroup discussed document TG/GERAN(proj.2), presented by Ms. Elizabeth Scott (United Kingdom), and agreed the following:

Cover page	to update common name to "Hardy Geranium"
3.4.1	to read "… 10 plants" (lower case)
4.2.2	template formatting issue: to read "…1 off-type is allowed."

T.o.C.	general remark: to add example varieties
Char. 1	– to check whether to be indicated as “QN” – to check the terminology “semi-upright” and “semi-spreading”
Char. 3	to check whether to add example variety for states 7 or 9
Char. 5	to check whether it should be “Flowering stem” (not “Stem”)
Char. 12	to check how varieties with a silvery sheen would be recorded
Char. 22	check whether “straight” would be more appropriate for state 2
Char. 24	check whether “straight” would be more appropriate for state 4
Char. 32	to check whether to add example variety for state 7
Char. 34	to check whether to have 3 states and to be indicated as “PQ”
Char. 48	– to check whether to read “Petal: distribution of conspicuous veins” – state 3 to read “distal three quarters”
Char. 49	to develop color groups
Ad. 7, 21	to add diagram
Ad. 24	to check whether illustration requires improvement for state 4
Ad. 34	to improve illustration (misleading width of petal)
Ad. 38	to add diagram to illustrate low and high ratio
Ad. 41	to check why the very base is excluded at states 5, 6, 7 (see Ad.47 state 3)
Ad. 44, 46	to standardize the presentation
Ad. 48, 49	to correct the spelling of “conspicuousness” (template issue?)
TQ 5	general: color groups to be developed
TQ 6	to check whether to use a different example

*Hydrangea (*Hydrangea *L.)*

87. The subgroup discussed document TG/133/5(proj.1), presented by Mr. Pascal Coquin and Mr. Bernard le Pautremat (France) on behalf of Ms. Françoise Jourdan (France), and agreed the following:

2.2	to read “The material is to be supplied in the form of plants capable of expressing all characteristics in the first growing cycle.”
3.1.1	to read “… normally be one…”
3.1.2	to be deleted
3.1.3	to be deleted
3.3.3	to read “In particular, the plants should not be grown in a medium that will specifically affect the sepal color.” (delete the rest of paragraph)
4.2.2	to read “.. 1 off-type is allowed.”
5.3	– to add color groups to all color characteristics – to add Char. 1 as grouping char.
Char. 2	– to add (+) and explanation to explain “including inflorescence” – to read “Only varieties with plant type: non-climbing: Plant: height” – to be indicated as MS/MG – to add example variety for state (9) “very tall”
Char. 5	to revise wording of header (to check proper terminology)
Char. 6	– states of expression to be indicated in the following order: green, red, brown, black – to add example varieties
Char. 7	– to have a symmetric scale of 3, 5 or 9 notes but with state “medium” at the middle of the scale) – to check whether varieties with state “absent” exist in collection of varieties – to read “stem: number of lenticels”
Char. 8	to add example varieties
Char. 9	to provide new pictures

Char. 10, 11	to be indicated as MS/VG
Char. 16	– to check whether example variety “King George” (state 1 or 3?) – to check whether characteristic is observable for both leaf types (Char. 12) – to improve header as follows : Leaf blade: depth of incisions on margin
Char. 17	to be replaced with new approach to describe leaf blade color
Char. 18	to be replaced with new approach to describe leaf color
Char. 20	to be deleted
Char. 21	to consider following approach to describing leaf blade color: Leaf blade: variegation (absent present) Leaf blade: main color Leaf blade: secondary color
Char. 22	to check whether to be indicated as QN and have 3 states
Char. 23	to have a symmetric scale of 3 or 5 notes (state “medium” at the middle of the scale)
Char. 27, 28	to be indicated MS/MG
Char. 30	to revise order of states of expression: (1) in one whorl; (2) in two or more whorls; (3) irregular
Char. 33	– to be indicated MS/MG – state (2) to read “only 4”
Char. 34	to have state “erect” as note (1)
Char. 35	state “notched” to read “emarginated”
Char. 36	– to check whether characteristic necessary – to check whether to add example varieties
Char. 37	to check the wording of state (3) “canaliculate”
Char. 39	to add state (5) “very strong”
Char. 42, 43	to consider whether both characteristics 42 and 43 are necessary or whether to delete 42
Char. 45	state (3) to read “flush”
Char. 48	to check whether the characteristic is consistent or whether to be deleted
Char. 49	to check whether to be observed for all varieties (even if change of color present in those species only)
Ad. 5	to replace illustration to demonstrate both states of expression
Ad. 6, 9, 25	to delete photos. Illustration of colors may not be appropriate (see TGP/7, GN36)
Ad. 8	to improve photos
Ad. 13	state “circular” to have note (2) and “elliptic” (3)
Ad. 24	to check whether to improve illustrations
Ad. 25	to check whether to delete photos. Illustration of colors may not be appropriate (see TGP/7, GN36)
Ad. 26	to check whether to provide illustrations of states (2) and (4)

**Petunia (*Petunia *Juss.;* ×Petchoa *J.M.H. Shaw) (Revision)*

88. The subgroup discussed document TG/212/2(proj.3), presented by Ms. Andrea Menne (Germany), and agreed the following:

1.1	– to read “…*Petunia* Juss and x*Petchoa*…” (to add “and”) – to remove double notation of full stop sign.
1.2	to delete version of TG/207
2.2	to read “The material is to be supplied in the form of plants or seed.”
2.3	to read “vegetatively propagated varieties: 15 plants”
5.3	to read “Gr. 5: blue pink”
Char. 1	to add (*)

Char. 2	to be indicated as MS/VG/MG
Char. 3	to delete (*)
Char. 10	to be indicated as MS/VG/MG
Char. 11	to add state “very strong” note (5) and to confirm example varieties for all states of expression
Char. 15	to have states “sparse” (1); “medium” (2); “dense” (3)
Char. 30	– to use 5 notes scale with states from “very narrow” to “very broad” – to be indicated as MS/VG/MG
Char. 34	to replace states by “whitish”, “yellow”, “pink”, “light blue”, “blueish violet”
Ad. 1	to position all illustrations on same level (indication of ground level)
Ad. 12	to correct tab formatting
Ad. 13	to read: “Ad. 13: Calyx lobe: width”
Ad. 14	to read “A double flower has more than one whorl of corolla lobes.”
Ad. 15	to rename states of expression “sparse” (1), “medium” (2) and “dense” (3) and use same photographs
Ad. 20	to correct spelling of “conspicuousness”
Ad. 23	– to check whether to read “… Due to the conditions…” – to read: “Petunia varieties with bi- or multi-colored flowers may have a strong reaction to the environmental conditions. Due to the conditions during a specific period of their bud development the area of the secondary color on some flowers can be different from the area on other flowers on the same plant. Therefore the distribution of the secondary color should be observed on those flowers which have the predominant distribution.” – to replace the photograph for note (5) “irregular”
Ad. 30	to check whether to provide new illustrations for the enlarged scale of notes
TQ 1.	to place Petunia as 1.1.1 and xPetchoa as 1.2.1 (invert order of presentation)
TQ 5.2	to add note “1” and box (editorial)
TQ 5.7, 5.8	to indicate that the applicant should fill in either the RHS Colour Chart or the color group

**Zinnia* (Zinnia *L.*)

89. The subgroup discussed document TG/ZINNIA(proj.6), presented by Mr. José Mejia Muñoz (Mexico), and agreed the following:

Cover page	- to change coverage of the Test Guidelines to *Zinnia* L. (UPOV code: ZINNI) - to add common names in Spanish: “Miguelito; Carolina”
1.	to read “These Test Guidelines apply to all varieties of *Zinnia* L.”
2.2	to read “…in the form of plants or seeds.”
2.3	to read “The minimum quantity of plant material, to be supplied by the applicant, should be: for vegetatively propagated varieties, 10 plants or, for seed-propagated varieties, a sufficient quantity of seeds to produce 10 plants for F1 hybrids and 40 plants for cross-pollinated varieties.”
3.4.2	to read “… at least 10 plants for vegetatively propagated varieties and F1 hybrids, and 40 plants for cross-pollinated varieties.”
4.1.4	to read “Unless otherwise indicated, for the purposes of distinctness all observations on single plants should be made on 9 plants for vegetatively propagated varieties and for F1 hybrids and at least 20 plants for cross-pollinated varieties or parts taken from each plant and any other observations made on all plants in the test, disregarding any off-type plants.
4.1.6	to be deleted

4.2.2	to read “For the assessment of uniformity of vegetatively propagated varieties and F1 hybrid seed-propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, one off-type is allowed.”
4.2.3	to be deleted
4.3.3	to be deleted
5.3(b)	to read “Plant: height (characteristic 2)”
5.3(c)	to read “Flower head: type (characteristic 15)”
5.3(d)	to read “Ray floret: main color of inner side (characteristic 27)” (with the following color groups: white, green, yellow, orange, pink, red, purple)
5.3(e) to (o)	to be deleted
T.o.C.	– general remark: to confirm characteristics to be indicated with an (*) – to include explanations in 8.1 and 8.2 – general remark: to check the use of the example varieties – general remark: to capitalize first letter of second name of example varieties (e.g. Yellow flame) (template issue?)
Char. 4	– note (7) to read “strong” – to check whether to read: “... on middle third” and check example varieties – to check whether to have notes 1 to 5 with state 1 to read “absent or very weak” and state 5 “very strong”
Char. 6	– state “long” to read “broad” and to have note (7) – to read “Leaf: width” (add space after column) – to be moved after Char. 7
Char. 9	state 2 to read “at middle”
Char. 11	to provide example variety for state 2
Char. 14 to 17	to re-order as follows: 15, 17, 14, 16
Char. 21, 22	to provide example varieties
Char. 24	– to read “Ray floret: strength of curvature” (add space) – to have 5 states
Char. 26 to 32	to re-order as follows: 27, 28, 26, 29, 32, 30, 31
Char. 32	to add state 1 “none” (to have same states as Char. 28)
Char. 33	to add explanation on before dehiscence
8.1	to check whether to add new indication on the beginning stage of observation
8.1(a)	to add space between “third” and “of”
8.1(d)	to be deleted
8.1(e)	to check whether to replace with standard wording
8.2	to reinstate explanations from previous version
9	to arrange presentation
TQ 4.	to reinstate standard questions about breeding and about propagation, etc. as in proj.4 (template issue?)
TQ 5.4 (24)	to be replaced with char. 27 “Ray floret: main color of inner side” and indicate range of colors
TQ 7.3	to reinstate text from previous draft “A representative color photograph of the variety displaying …”

Proposals for partial revision / correction of Test guidelines

Partial Revision of the Test Guidelines for Dianella (document TG/288/1)

90. The subgroup discussed document TWO/49/21, presented by Mr. Nik Hulse (Australia), and agreed with the proposed revisions subject to replacing state (1) “absent” by “none” in characteristic 22.

Partial Revision of the Test Guidelines for Lavandula/Lavander (document TG/194/1)

91. The subgroup discussed document TWO/49/19, presented by Mr. Pascal Coquin and Mr. Bernard Le Pautremat (France), and agreed with the proposed revisions subject to the following amendments:

new “Leaf: length”	to use 1 to 5 scale
new “Leaf: width”	to use 1 to 5 scale
new “Spike: width of infertile bracts”	to use 1 to 5 scale
new “Spike: number of infertile bracts”	to use 1 to 5 scale
Ad. 35	to read: “Observations on corolla color should be made on recently opened flowers.”

Information and databases

(a) UPOV information databases

92. The TWO considered document TWO/49/5.

UPOV Code System

93. The TWO noted the developments concerning UPOV codes, as set out in document TWO/49/5, paragraph 8.

94. The TWO noted the invitation to check the amendments to UPOV codes, the new UPOV codes or new information added for existing UPOV codes, and the UPOV codes used in the PLUTO database for the first time, as provided in the Annexes to document TWO/49/5. The TWO noted that any comments were to be submitted to the Office of the Union by October 7, 2016.

PLUTO Database

95. The TWO noted the summary of contributions to the PLUTO database from 2012 to 2015 and the current situation of members of the Union on data contribution, as presented in Annex II to document TWO/49/5.

96. The TWO noted that the CAJ, at its seventy-second session, had agreed that the WG-DEN should consider proposals for the expansion of the content of the PLUTO database to include all recognized varieties, including those that had not been, or were no longer, registered/protected.

97. The TWO noted that the WG-DEN, at its first meeting, had agreed to defer the consideration of the matters concerning the possible expansion of the content of the PLUTO database to include all recognized varieties, including those that had not been, or were no longer, registered/protected until its second, or a subsequent, meeting.

98. The TWO noted the information concerning the training courses “Contributing data to the PLUTO database”, held in Geneva in September and October 2015, as set out in document TWO/49/5, paragraphs 22 to 24.

(b) Variety description databases

99. The TWO considered document TWO/49/6.

100. The TWO noted the developments reported in document TWO/49/6 and, in particular, that:

(a) the TC, at its fifty-second session, had agreed to invite members of the Union to make presentations at the forthcoming session of the BMT on how databases containing molecular data might be developed in UPOV; and

(b) the outcome of discussions during the BMT on how databases containing molecular data might be developed in UPOV would be reported to the TC at its fifty-third session.

(c) Exchange and use of software and equipment

101. The TWO considered document TWO/49/7.

Document UPOV/INF/16 "Exchangeable Software"

102. The TWO noted that the Council, at its forty-ninth ordinary session, held in Geneva, on October 29, 2015, had adopted document UPOV/INF/16/5 "Exchangeable Software".

103. The TWO noted that the TC, at its fifty-second session, had agreed to propose the revision of document UPOV/INF/16/5 to include information on the use of software by members of the Union, which would be reported to the CAJ at its seventy-third session and, if agreed by the CAJ, a draft of document UPOV/INF/16/6 "Exchangeable Software" would be presented for adoption by the Council at its fiftieth ordinary session.

Document UPOV/INF/22 "Software and equipment used by members of the Union"

104. The TWO noted that the Council, at its forty-ninth ordinary session, held in Geneva, on October 29, 2015, had adopted document UPOV/INF/22/2 "Software and equipment used by members of the Union".

105. The TWO noted that the TC, at its fifty-second session, had agreed to propose the revision of document UPOV/INF/22/2 to include information on the use of software by members of the Union and, if agreed by the CAJ, a draft of document UPOV/INF/22/3 would be presented for adoption by the Council at its fiftieth ordinary session.

(d) Electronic application systems

106. The TWO considered document TWO/49/8.

107. The TWO noted the developments concerning the development of a prototype electronic form.

Recommendations on draft Test Guidelines

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

108. The TWO agreed that the following draft Test Guidelines should be submitted to the TC for adoption at its fifty-third session, to be held in Geneva from April 3 to 5, 2017, on the basis of the following documents and the comments in this report:

Subject	Relevant document(s)
*Abelia (*Abelia* R. BR.)	TG/ABELI(proj.4)
Aglaonema (*Aglaonema* Schott.)	TG/AGLAO(proj.7)
*Dianella (*Dianella* Lam. ex Juss.) (Partial Revision: Chars. 16 and 22)	TWO/49/21 and TG/288/1
*Freesia (*Freesia* Eckl. ex Klatt) (Revision)	TG/27/7(proj.3)
*Lavender (*Lavandula* L.) (Partial Revision: addition of new characteristics for Leaf length and width and color of corolla)	TWO/49/19 and TG/194/1
*Petunia (*Petunia* Juss.) (Revision)	TG/212/2(proj.3)

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

109. The TWO agreed to discuss the following draft Test Guidelines at its fiftieth session:

Alstroemeria (*Alstroemeria* L.) (Revision)
Berberis (*Berberis* L.) (Revision)
Calendula (*Calendula* L.)
*Coleus (*Plectranthus scutellarioides* (L.) R. Br.)
Coreopsis (*Coreopsis* L.)
Gazania (*Gazania* Gaertn.)
*Grevillea (*Grevillea* R. Br. corr. R. Br.)
*Guzmania (*Guzmania* Ruiz et Pav.) (Revision)
*Hardy Geranium (*Geranium* L.)
Hydrangea (*Hydrangea* L.) (Revision)
Kangaroo Paw (*Anigozanthos* Labill.) (Revision)
Lagerstroemia (*Lagerstroemia* L.)
Oncidium (*Oncidium* Sw.; x*Oncidesa* Hort.; x*Ionocidium* Hort.; x*Zelenkocidium* J.M.H.Shaw.) (Partial Revision)
Phaleanopsis (*Phalaenopsis* Bl.) (Partial Revision)
Ranunculus (*Ranunculus* L.)
*Zinnia (*Zinnia* L.)

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

(c) Possible Test Guidelines to be discussed in 2018

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

China-rose (*Hibiscus rosa-sinensis* L.)
Eucalyptus (*Eucalyptus* L'Hér.)
Narcissus (*Narcissus* L.)
Paphiopedilum (*Paphiopedilum* Pfitzer)
Poinsettia (*Euphorbia pulcherrima* Willd. ex Klotzsch)

Date and place of the next session

112. At the invitation of Canada, the TWO agreed to hold its fiftieth session in Victoria, British Columbia, Canada, from September 11 to 15, 2017, with the preparatory workshop on September 10, 2017.

Chairperson

113. The TWO agreed to propose to the TC that it recommend to the Council to elect Mr. Henk de Greef (Netherlands), as the next chairperson of the TWO.

Future program

114. 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 (oral report by the Office of the Union)

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

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

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

7. Information and databases

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

   (d) Electronic application systems (document to be prepared by the Office of the Union and documents invited)

8. Case study on minimum distances between vegetatively reproduced ornamental and fruit varieties (presentation by the European Union and presentations invited)

9. Number of growing cycles in DUS examination (document to be prepared by the Office of the Union and documents invited)

10. Characteristic expression between years or environments for ornamental varieties (documents to be prepared by Australia and New Zealand and documents invited)

11. Report on court cases dealing with technical matters (document to be prepared by the European Union and documents invited)

12. Defining color groups for grouping of varieties and organizing the growing trial (document to be prepared by Germany)

13. Experience with the RHS Colour Chart and possible future addition of colors

14. Guidance on illustrations for pseudo-qualitative characteristics for shape (document to be prepared by the Office of the Union)

15. Proposal on the principal botanical name for intergeneric and interspecific hybrids and possible effect on the “Guide to the UPOV Code System”

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

17. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee

18. Proposals for partial revision/correction of Test Guidelines

19. Discussion on draft Test Guidelines (Subgroups)

20. Recommendations on draft Test Guidelines

21. Guidance for drafters of Test Guidelines

22. Date and place of the next session

23. Future program

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

25. Closing of the session

Visit

115. On the afternoon of June 15, 2016, the TWO visited Gang San Orchids, an orchid breeding and production company located in Busan, Republic of Korea. The TWO was welcomed by Mr. Jae Hwan Soe, CEO, and received a presentation on *Phalaenopsis* breeding at Gang San Orchids, a copy of which is reproduced in Annex IV to this report. The TWO received information on the breeding programs and techniques used for the development of new varieties of *Phalaenopsis* that had resulted in 23 protected varieties in the Republic of Korea and abroad.

116. The TWO adopted this report at the closing of the session.

[Annexes follow]

ANNEX I

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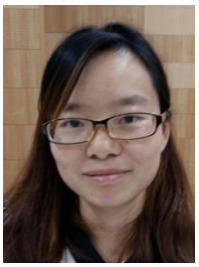

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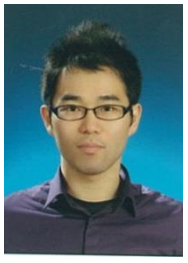

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[Annex II follows]

ANNEX II

WELCOME ADDRESS

Mr. Oh, Byeongseok

Director-General, Korea Seed & Variety Service

Honorable guests and participants!
Good morning.

I am the Director-General of Korea Seed & Variety Service under the Ministry of Agriculture, Food and Rural Affairs.

I am very pleased to meet international PVP leaders home and abroad today, participating in the “forty-ninth session of the Technical Working Party for Ornamental Plants and Forest Trees of UPOV.”

I would like to welcome all of you and convey my special appreciation toMr. Leontino Taveira of UPOV and Mr. Kenji Numaguchi, Chairperson of the TWO. And it is my personal honor to be hosting this session.

The Republic of Korea has enforced the plant variety protection system since 1998. Over the past 19 years, we have significantly raised awareness on plant variety protection among farmers and stake holders. The Republic of Korea has also been developing excellent varieties through an effective operation of the system.

This is all thanks to the concerted effort of the government, the seed industry, research institutes, individual breeders, farmers and consumers. We, as a government organization operating the plant variety protection system, are very proud of this result.
We will be celebrating the 20th anniversary of the Plant Variety Protection System next year. The Republic of Korea has worked hard over the last 2 decades to solidify the foundation and raise awareness of the System.

We are now poised to take our seed industry to the next level for the next 2 decades. In the process of sophisticating and effectively managing the Plant Variety Protection System, your continuing support and interest will be deeply appreciated.

Once again I am grateful to your participation at the UPOV TWO meeting in Gimcheon. I wish you a safe and pleasant stay in the Republic of Korea.

Thank you.

[Annex III follows]

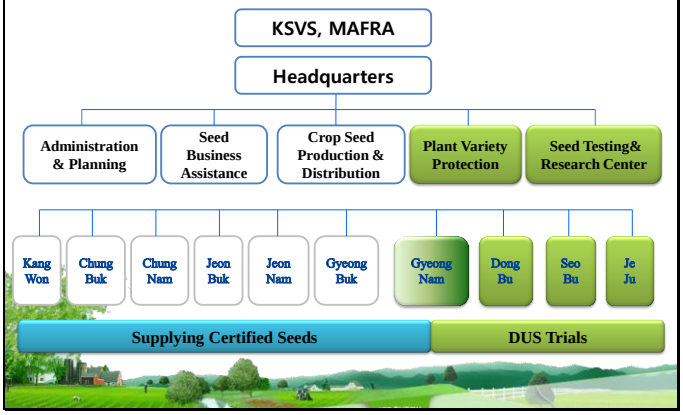
1

Plant Variety Protection in the Republic of Korea

UPOV 49th session, Gimcheon, 13~17 June, 2016

2

KSVS Organization



3

Missions

- Supplying Seeds of Agricultural Crops
- Plant Variety Protection
- Supervising Circulation of High Quality Seeds
- VCU Test for National Listing
- Seed Certification

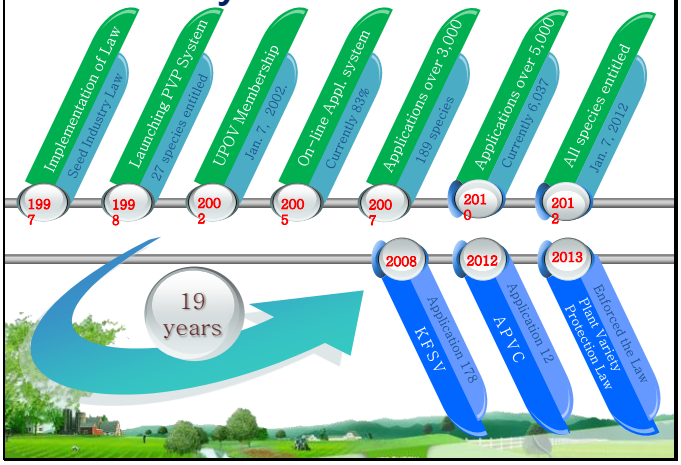
4

5

6

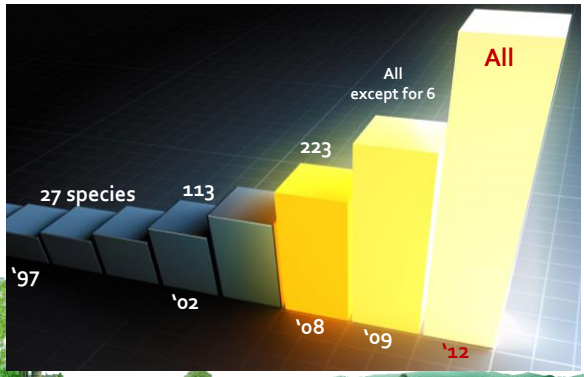
7

PVP History



8

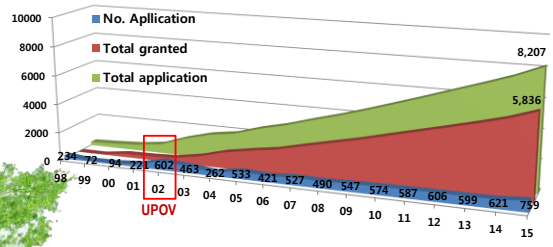
Designation of Genera and Species



9

Application & Registration

As of December 2015, Among the total **8,207 applications** filed,
5,836 were granted PVPR
No. 7 in active titles among the UPOV members



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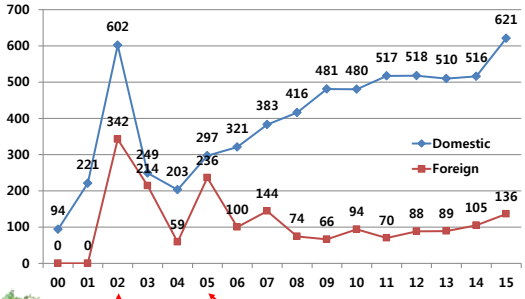
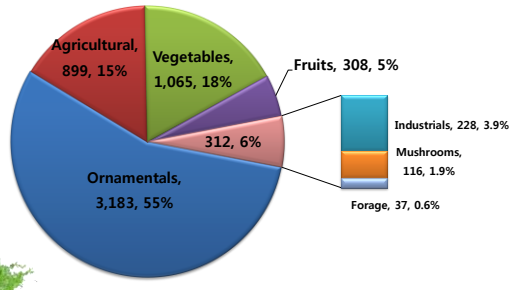


11

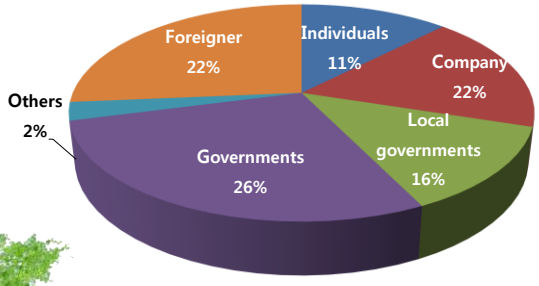
Registration by Crop Category



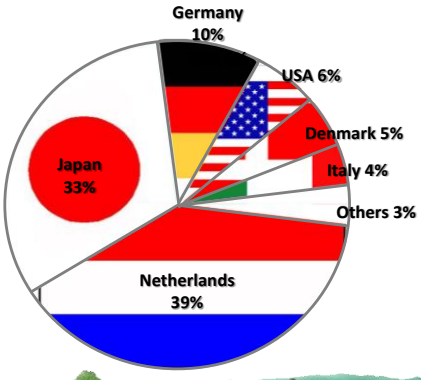
Total number of 5,836 registrations for plant breeders' rights had been filed until December 2015.

12

Registration by Applicants

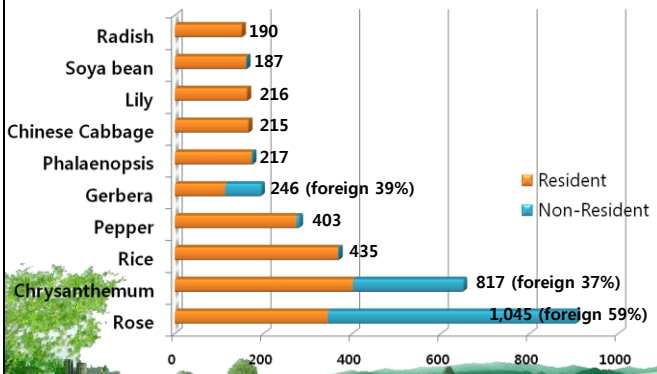


Application by Non-Residents



13

Top 10 Application Crops



14

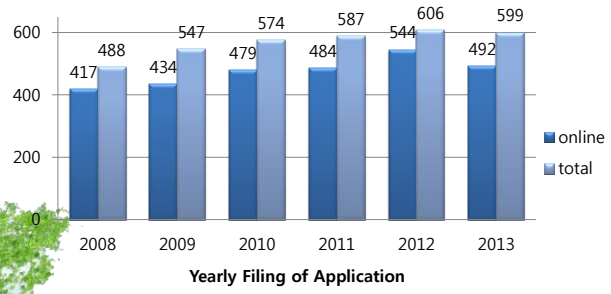
Introduction of KSVS Information System related to PVP

- Electronic Application System
- PVP Examination Aid System
  - Supporting examiner inspects Application and grants PVPR
- DUS trial Data Management System
  - Statistical Processing and Building Characteristics Database
- Electronic Document Management System
  - Keeping and Searching all Document related to Application

15

Electronic Application System

- Web-based online system (http://www.seednet.go.kr)
  - Applicant can access through Internet



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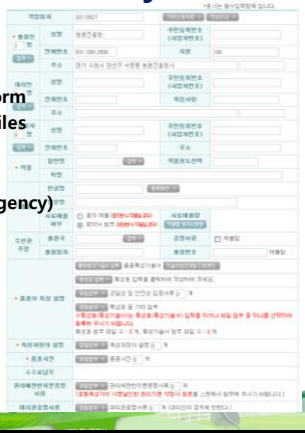
Electronic Application System

① Permission of membership
② Log-in
③ Filling-in the application form
④ Attachment of additional files
⑤ Insert Digital Signature
⑥ Pay fee for application
(in case non-government agency)

⇩

Application
Receipt



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PVP Examination Aid System

- Web-based online system (for Examiner and Operation staff)

Examiner
① Making Decision Whether or not grant PVPR
② Checking Variety denomination
③ Writing Examination Report
④ Publishing Gazette

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PVP Examination Aid System

- Web-based online system (for Examiner and Operation staff)

PVP Operation staff

① Registration and Issue of PVPR

② Notification and Recording
The payment of Registration / Annual fee

③ Cancellation of invalid PVPR

④ Keeping the Change of PVPR Manager or valid Right

19

DUS trial Data Management System

- Web-based online system (for DUS staff)

DUS staff

① Input DUS trial Data and statistical processing

② Searching for Characteristic Database
To find out comparison or reference variety

③ Writing DUS trial report

20

Electronic Document Management System

- Web-based online system

① Conversion to PDF format all document

- Application form(including attached files), Examination Report, DUS trial Report, Certification of PVPR and so on…

② Keeping Document Permanently

③ Searching Document by Variety Denomination, Application Number

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Searching for Variety Image

- KSVS Homepage (http://www.seed.go.kr)

22

E-gazette

Click Here to see image

23

International Cooperation

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25

KOICA PVP Training Course

26

Asia Seed Industry Development Training

to increase mutual understanding of the current situation of seed industry in the Asian area and to learn the related technology in seed testing

Seed testing program for germination, variety analysis, seed-borne diseases, moisture contents, seed purity organized by ISTA laboratory of the Republic of Korea

International seminar on quality assurance

27

Asia Seed Industry Development Training

28

International Seminar on Seed Quality Assurance

❖ Dr. Eddie Goldchagg
(Chair of ISTA Sampling Committee)
Topic : Seed Sampling on Seed Quality Assurance

29

KSVS-Myanmar Project('15~'17)

Capacity Building for Seed Quality Assurance System of Rice in Myanmar

30

[Annex IV follows]

Plant Variety Protection and DUS testing

Breeding of Phalaenopsis

May 26 2016

Mr. Soe, Jae Hwan

Kangsan Orchids
Busan. Republic of Korea

1

- Contents -

1. About Phalaenopsis
2. Breeding
ⓐ Set the breeding purpose
ⓑ A method of breeding technique – Cross breeding
ⓒ Sterilization and sowing
ⓓ Growing and transplanting
ⓔ Progressing of the breeding
3. New varietes bred by Kangsan orchid
4. Conclusion

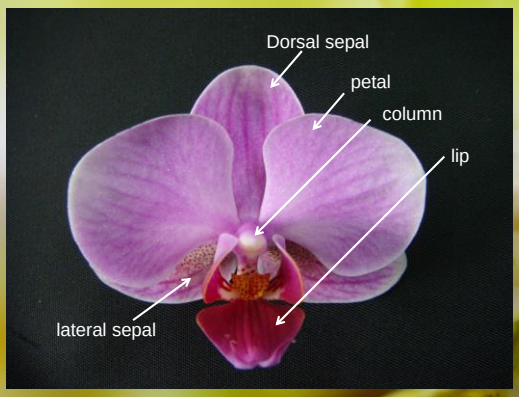
2

1. About Phalaenopsis

- **Etymology :**
  The name comes from Greek "Phalaina+Opisi" which means "A flower look like butterfly"
- **The habitat**
  Tropical Asia like Philippine, Malaysia, Indonesia, Vietnam, Taiwan Province of China and the north area of Australia
- **The amount of original species** : About 60 species
- **Classification** : Orchids 750 genus, 25,000species
  Orchidaceae(Orchid family) – Epidendroideae – Vandeae – Aeridinae – *Phalaenopsis* Blume

3

The structure of Phalaenopsis



4

2. Production of Orchids in the Republic of Korea

	Production	Phalaenopsis	Cymbidium
Area(ha)	162.7	44	69.5
Production (1,000 plant)	19,867	6,849	2,694
The amount of production (1,000KRW)	64,282,037	23,702,580	17,811,397

5

2. Breeding

Ⓐ Set the breeding purpose

- Altough the number of flower, flower size and color are important purpose to improve varieties, it is different to the taste, type of people and it has been changing according to the time, nation and area.

But the below characteristics(like a strength and thickness of peduncle, a strength of pedicle, an arrangment of flowers ect) are unchanging important breeding goal

① propagation ② growth rate(speed) ③ easiness of cultivation ④ flowering controll ⑤ shape of leaf ⑥ flowering time ⑦ flower color ⑧ falling flower bud ⑨ resistance of disease ⑩ Adoption of cultivation circumstances ⑪ fragrance

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6

2. Breeding

Ⓑ The method of breeding technique "Cross breeding"

○ Put the pollinia into the stigma by pincette

- The time – Just blooming
- The number of fruit : pollinating 2~3 flowers and remaining 1 healthy fruit and remove others
- Sowing : Sown the seeds are produced as flask plant 8~ 10months later
- Caution : Used plants don't have to use as mother plant next year

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Busan. Republic of Korea

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2. Breeding

Ⓒ Sterilization and seedling

○ Mixing and shaking 7g pottassium chlorate and 100ml water
⇒ Using supernatant(upper liquid)

○ Put seeds into test tube and pour the sterilizing liquid (much more 50times of seeds)
⇒ after about 9~10 minute removing the liquid

○ Rinsed the seeds and taking some amount of seeds to be sown

○ Sterilizing time

- 1% Sodium chlorate – 5 minute
- 3% Hydrogen peroxide – 20 minute

→ The time would be changed and controlled the degree of contamination

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2. Breeding

Ⓓ Growing and transplanting

○ It is different depending on the culture period, the number of sowing and a variety.

○ Phalaenopsis germinate that the condition of mixed with lots of PLB.
If it would be not divided, the growth is restrained
So PLB have to be separated each to grow well.

○ At first transplanting, it is transplanted 2 or 3 times depending on growing condition, when it's been growing for 2~3 months.

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9

2. Breeding

Ⓔ Progressing of the breeding

cross → seed → sowing → culture → cultivate → selection → propagation → cultivation → culture → distribution

○ The period of developing new varieties : about 8~10 year

○ The lack of economics is big obstacle that it is spent lots of time with over cost to develop new variety.

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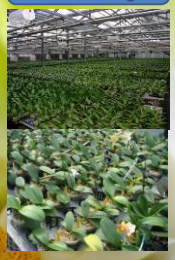
10

Progressing of the breeding

· Cross breeding

crossing → sowing → harding & cultivating

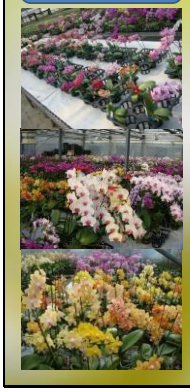


Kangsan Orchids
Busan. Republic of Korea

11

Progressing of the breeding

selection & test → peduncle culture & propagation → cultivate



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13

Progressing of the breeding

air conditioning TEST

applied and granted PBR

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Leading mutation

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3. New varieties by Kangsan orchid

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Busan. Republic of Korea

16

New variety 1 by Kangsan orchid

○ Denomination : **KS Little Gem**
○ PBR No. : **3291**
○ Character
- Pink color with deep red lip
- medium-small size, multi flower
- compact leaf
- good at air condition, long flowering period, good growth and economics

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New variety 2 by Kangsan orchid

○ Denomination : **KS beauty**
○ PBR No. : **2910**
○ Character
- Red color with deep red lip
- cultivate much more number of plants per unit area
- good at air condition, good economics

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New variety 3 by Kangsan orchid

○ Denomination : **KS Harmony**
○ PBR No. : **3294**
○ Character
- Pink stripe with harmonized lip
- good arrangement, multi flowers
- very long flowering period
  flower buds initiate continuously under the low temperature

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New variety 4 by Kangsan orchid

- Denomination : **KS Lady**
- PBR No. : **3298**
- Character
  - Pale pink with red lip
  - small and multi flowers
  - thick petals and long flowering period

20

New variety 5 by Kangsan orchid

- Denomination : **KS Muse**
- PBR No. : **3292**
- Character
  - White color with pale violet lip it is also called sakura color that is japanese taste

21

New variety 6 by Kangsan orchid

- Denomination : **KS Peach Girl**
- PBR No. : **2911**
- Character
  - Pale pink color with red lip color pattern is mild

22

New variety 7 by Kangsan orchid

- Denomination : **KS Pink**
- PBR No. : **3375**
- Character
  - Pretty pink color with passionate red lip
  - good at growth

23

New variety 8 by Kangsan orchid

- Denomination : **KS Pixie**
- PBR No. : **3295**
- Character
  - Pink stripe with red lip
  - small and multi flowers
  - exhibit on the table

24

New variety 9 by Kangsan orchid

- Denomination : **KS Pixie 2**
- PBR No. : **3297**
- Character
  - Pink stripe with red lip
  - small and multi flowers
  - exhibit on the table

25

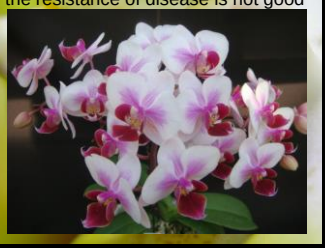
New variety 10 by Kangsan orchid

○ Denomination : **KS Sunrise**
○ PBR No. : **3297**
○ Character
- Pale pink stripe
- fancy and light lip

26

New variety 11 by Kangsan orchid

○ Denomination : **KS Twinkle**
○ PBR No. : **3296**
○ Character
- White ground color with moon pattern on the center
- passionate lip
- small and multi flowers
- multi branches
- the resistance of disease is not good



27

New variety 12 by Kangsan orchid

○ Denomination : **KS Vivien**
○ PBR No. : **3377**

○ Character
- Pink stripe with red lip
- small and multi flowers
- exhibit on the table

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New variety 13 by Kangsan orchid

○ Denomination : **KS Yuna**
○ PBR No. : **3376**
○ Character
- White ground color with passionate red lip
- the japanese taste

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New variety 14 by Kangsan orchid

○ Denomination : **KS Maria**
○ Applied No. : **2011-276**
(under the inspection)
○ Character
- White ground color with spotted lip
- excellent flower arrangement
- long flowering period
- japanese taste

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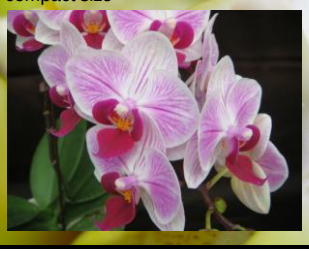
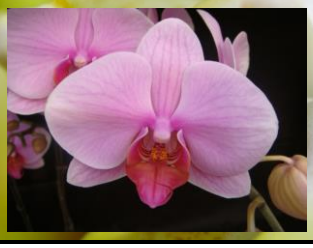
New variety 15 by Kangsan orchid

○ Denomination : **KS Vivien 2**
○ Applied No. : **2011-277**
(under the inspection)
○ Character
- Light pink stripe with red lip
- the number of flowers are more than 'KS Vivien'
- good flower arrangement
- compact size



New variety 16 by Kangsan orchid

○ Denomination : **KS Peace**
○ Applied No. : **2011-278** (under the inspection)
○ Character
- Warm and pale pink with harmonized lip
- excellent 8~9cm the flower arrangement
- long flowering period



31

New variety 17 by Kangsan orchid

○ Denomination : **KS Gem**
○ Applied No. : **2011-279** (under the inspection)
○ Character
- good flower arrangement
- under the low temperature, flower bud initiate continuously

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4. Conclusion

- Developing new varieties is not just bred by breeders.

  Specialist for breeding and even amateur have a will to breed the good new variety, then breeding new variety is getting developed and also excellent varieties would come out. These make a beautiful and richly world.

- Please support and I will do my best as much as I can for developing new varieties with which you can be fully satisified

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[Annex V follows]

ANNEX V

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE IN 2017

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

by August 1, 2016

Species	Basic Document(s)	Leading expert(s)	Interested experts (States/Organizations)[1]
*Abelia (*Abelia* R. BR.)	TG/ABELI(proj.4)	Ms. Françoise Jourdan (FR)	CA, GB, JP, KR, MX, NZ, QZ, Office
Aglaonema (*Aglaonema* Schott.)	TG/AGLAO(proj.7)	Mr. Kenji Numaguchi (JP)	AU, KR, NL, NZ, QZ, ZA, Office
*Dianella (*Dianella* Lam. ex Juss.) (Partial Revision: Chars. 16 and 22)	TWO/49/21 and TG/288/1	Mr. Nik Hulse (AU)	GB, NZ, QZ, ZA, Office
*Freesia (*Freesia* Eckl. ex Klatt) (Revision)	TG/27/7(proj.3)	Ms. Katie Pont (NL)	JP, KR, MX, QZ, ZA, Office
*Lavender (*Lavandula* L.) (Partial Revision: addition of new characteristics for Leaf length and width and color of corolla)	TWO/49/19 and TG/194/1	Ms. Françoise Jourdan (FR)	AU, CA, GB, JP, NZ, QZ, ZA, Office
*Petunia (*Petunia* Juss.) (Revision)	TG/212/2(proj.3)	Ms. Andrea Menne (DE)	AU, CA, CN, JP, KR, MX, NZ, QZ, ZA, CIOPORA, Office

[1] for name of experts, see List of Participants.

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWO/50
(* indicates possible final draft Test Guidelines)

(Guideline date for Subgroup draft to be submitted by Leading Expert: June 2, 2017
Guideline date for comments to Leading Expert by Subgroup: June 30, 2017)

New draft to be submitted to the Office of the Union

before July 28, 2017

Species	Basic Document(s)	Leading expert(s)	Interested experts (States/Organizations) [2]
Alstroemeria (*Alstroemeria* L.) (Revision)	TG/29/8(proj.1)	Mr. Henk de Greef (NL)	AU, CA, KR, JP, MX, NZ, QZ, ZA, Office
Berberis (*Berberis* L.) (Revision)	TG/68/3	Mr. Bernard Le Pautremat (FR)	CA, QZ, Office
Calendula (*Calendula* L.)	TG/CALEN(proj.1)	Mr. Kentaro Sekizawa (JP)	DE, GB, KR, MX, QZ, ZA, Office
*Coleus (*Plectranthus scutellarioides* (L.) R. Br.)	TG/SOLEN_SCU (proj.2)	Mr. Takayuki Mikuni (JP)	CA, DE, GB, KR, QZ, ZA, CIOPORA, Office
Coreopsis (*Coreopsis* L.)	New	Ms. Elizabeth Scott (GB)	AU, CA, JP, KR, MX, NZ, QZ, Office
Gazania (*Gazania* Gaertn.)	TG/GAZAN(proj.1)	Mr. Adriaan de Villiers (ZA)	AU, GB, JP, KR, MX, NZ, QZ, CIOPORA, Office
*Grevillea (*Grevillea* R. Br. corr. R. Br.)	TG/GREVI(proj.5)	Mr. Nik Hulse (AU)	GB, MX, NZ, QZ, Office
*Guzmania (*Guzmania* Ruiz et Pav.) (Revision)	TG/182/4(proj.2)	Mr. Henk de Greef (NL)	BR, CN, JP, MX, MY, QZ, Office
*Hardy Geranium (*Geranium* L.)	TG/GERAN(proj.2)	Ms. Elizabeth Scott (GB)	CA, DE, GB, JP, KR, MX, NL, NZ, QZ, CIOPORA, Office
Hydrangea (*Hydrangea* L.) (Revision)	TG/133/5(proj.1)	Ms. Françoise Jourdan (FR)	AU, CA, DE, JP, KR, MX, NZ, QZ, ZA, Office
Kangaroo Paw (*Anigozanthos* Labill.) (Revision)	TG/175/3	Mr. Nik Hulse (AU)	GB, JP, KR, NZ, QZ, Office
Lagerstroemia (*Lagerstroemia* L.)	TG/95/3	Ms. Françoise Jourdan (FR)	AU, JP, KR, QZ, Office
Oncidium (*Oncidium* Sw.; x*Oncidesa* Hort.; x*Ionocidium* Hort.; x*Zelenkocidium* J.M.H.Shaw.) (Partial Revision)	TG/283/1	Mr. Kenji Numaguchi (JP)	Office
Phaleanopsis (*Phalaenopsis* Bl.) (Partial Revision)	TG/213/2	Mr. Henk de Greef (NL)	Office
Ranunculus (*Ranunculus* L.)	New	Mr. Tetsuya Takahashi (JP)	KR, QZ, Office
*Zinnia (*Zinnia* L.)	TG/ZINNIA(proj.6)	Mr. Jose Mejía Muñoz (MX)	CN, GB, IL, JP, KR, Office

[2] for name of experts, see List of Participants.

DRAFT TEST GUIDELINES TO POSSIBLY BE DISCUSSED IN 2018

Species	Basic Document(s)
China-rose (*Hibiscus rosa-sinensis* L.)	New
Eucalyptus (*Eucalyptus* L'Hér.) (partial revision)	TG/296/1
Narcissus (*Narcissus* L.) (revision)	TG/87/2
Paphiopedilum (*Paphiopedilum* Pfitzer)	New
Poinsettia (*Euphorbia pulcherrima* Willd. ex Klotzsch) (revision)	TG/24/6

[End of Annex V and of document]