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UPOV

TWO/25/12
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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES

Twenty - fifth Session
Stellenbosch, South Africa, August 27 to September 7, 1992

REPORT

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

Opening of the Session

1. The twenty-fifth session of the Technical Working Party for Ornamental Plants and Forest Trees (hereinafter referred to as "the Working Party") was held near Stellenbosch, South Africa, from August 27 to September 7, 1992. The list of participants is given in Annex I to this report.

2. Dr. D.P. Keetch and Mrs. E. Buitendag of the Directorate of Plant and Quality Control, welcomed the participants to Stellenbosch. The session was opened by Mrs. E. Buitendag in her capacity of Chairman of the Working Party.

Adoption of the Agenda

3. The Working Party unanimously adopted the agenda of its twenty-fifth session which is reproduced in document TWO/25/1, after having included under item 5 the Test Guidelines for Dieffenbachia and deleted item 14, General Test Guidelines for ornamental species, subitems 15 (iii), Iris, 15 (iv), Kangaroo Paws, and 15 (viii), Chrysanthemum.

Short Reports on New Developments in Plant Variety Protection in Ornamental Plants and Forest Trees

4. The Working Party received short reports from some of the experts on recent developments in their countries. The expert from Australia reported on the new Bill on breeders' rights--now called the Plant Breeders' Rights Act--which would introduce penalties for infringements, require labelling of all plant material sold and would cover fungi as well. The expert from Germany reported the abolishment of the list of species for which plant variety protection was available following the introduction of a new law by which the coverage of protection was extended to the whole plant kingdom. The expert from the Commission of European Communities (CEC) reported on the introduction of an EEC scheme on the marketing of ornamental plant propagating material and ornamental plants (EEC Council Directive 91/682/EEC of December 19, 1991).

Important Decisions Taken During the Last Sessions of the Working Party and the Technical Committee

5. Dr. M.-H. Thiele-Wittig gave a brier report on the main items discussed during the last sessions of the Working Party and of the Technical Committee, referring for further details to the full reports reproduced in documents TWO/24/12 and TC/27/9 respectively.

6. Cooperation with the breeder in the testing of varieties. The Chairman referred to document TWC/9/9 Rev. which related the Danish experiences with the involvement of the breeder in the testing of varieties. The expert from Australia reported on the testing in his country which fully depended on breeders' testing and explained in detail the role of independent persons working in addition to the examiners. The independent experts had to be accredited by the Plant Variety Rights Office and were listed as experts that could be consulted. The independent qualified person could either do the observations himself or check those done by the breeder or applicant, comparing the test results on the site. The examiner, the independent expert and the breeder or applicant would meet at the testing place of the breeder or applicant to discuss the results of the test. A more detailed description of the procedure applied in Australia would follow and will be reproduced as an annex to the final version of this report. The Working Party appreciated the detailed explanations of the Australian expert, as they made clear that the differences between the breeders' and government testing were not as important as thought by some experts.

7. Tissue culture. The Working Party noted that no big problems had arisen in tissue culture of ornamental species so far. It would, however, closely follow the developments and, if necessary, also address the question in individual Test Guidelines.

8. Obsolete varieties. The Working Party noted that unlike for instance agricultural varieties--where important improvements would make the reappearance of old varieties very unlikely--in ornamental species there was always the risk that old varieties having disappeared from the market would make a comeback depending on a certain fashion. It was therefore necessary to keep large reference collections or to ensure maintenance of plant material in genetic resource centers. If no more plant material of an old variety was available, an application for protection of similar or identical material could not be refused on the basis of an existing description of that old variety. DNA finger prints could help determining whether the variety existed before or not.

9. Uniformity in varieties where both propagation by seed and vegetative propagation existed. The Working Party noted the request from the Technical Committee to rediscuss the uniformity requirements for varieties with different possibilities of propagation. Several experts had great difficulty accepting that varieties with different degrees of uniformity, depending on the way of propagation and on the species, should be admitted. If each variety could only be propagated either by seed or vegetatively, different degrees of uniformity could be applied. If, however, both ways of propagation were possible, the situation changed if different levels of uniformity were admitted. While the Working Party agreed, after detailed discussions, on the principle of different levels of uniformity depending on the way of propagation, it decided to continue its discussions on the subject during its next meeting, particularly on the question of relative uniformity in seed propagated cross-pollinated species, taking Ranunculus as an example.

10. Books and documents. The Working Party agreed to further check the document (TC/27/4) on reference books and documents for the testing of varieties and requested the experts to send any amendments or additions to the Office of UPOV.

11. Asterisk characteristics. The Working Party had a lengthy discussion on the use of asterisks in the Test Guidelines. While the meaning of an asterisk was very clear, the opinions differed as to the criteria used in deciding whether or not to attribute an asterisk to a certain characteristic. Some considered the discriminating power to be the main criterion and thus all grouping characteristics had to receive an asterisk. Others took the view that, apart from the grouping characteristics, all characteristics were more or less of the same value and a further distinction was not, or only exceptionally, justified. Others considered the cost and effort involved in the testing of a given characteristic to be a criterion, or the possibility of certain offices to perform the tests (e.g. for resistance characteristics), or the ability of the examiner, or the availability of certain machinery for measurements. An asterisk should only be given to characteristics needed and actually used as a routine. While those countries that have their tests done in a regional testing center were open to the attribution of an asterisk to as many characteristics as possible (approx. 95% of those listed in the Table of Characteristics), others questioned such a high number. They thought in particular of the possibility of applicants having to perform the tests who would have difficulties in understanding why so many characteristics had to be observed when often a new variety could be clearly distinguished by one single characteristic. Some experts considered the asterisk to be mainly a means of allowing to describe the variety and thus to enable the experts to understand each other when referring to a given variety. The asterisk would thus identify only a limited number of characteristics for description purposes. Other experts warned against a too limited number of asterisks or characteristics in general in the UPOV Test Guidelines, which could--as happened--lead to the unsatisfactory situation that a given variety was rejected in one country applying a limited number of characteristics and accepted in another country applying several additional characteristics. The Working Party agreed to ask the Technical Committee to have a general discussion on the criteria to be applied for the following three groups of characteristics: (i) with asterisk, (ii) without asterisk, (iii) not included in the UPOV Test Guidelines but used by some member States.

12. Measuring of characteristics. The Working Party noted that it was not possible at present to determine from the UPOV Test Guidelines which characteristics should be observed visually and which should be measured.

While some experts took the position that it was irrelevant whether the characteristic was observed visually or measured as the result was the same, others proposed to indicate the way of observation in the Test Guidelines. In general, the number of measurements would increase with the number of varieties within the species concerned.

Final Discussion on Draft Test Guidelines

Test Guidelines for Aster

13. The Working Party noted the draft Test Guidelines for Aster as reproduced in document TG/141/1(proj.) and document TWO/25/10 with comments on that document prepared by experts from the International Association of Horticultural Producers (AIPH). It finally changed in document TG/141/1(proj.) only the first state of characteristic 21 to "narrow elliptic". To the comments made in document TWO/25/10 it replied that the remarks concerning the testing place could be made for any other testing place in a similar way and the remark with respect to microscopic research was unfortunately too general to be constructive for the document in question.

Test Guidelines for Dieffenbachia

14. The Working Party noted the draft Test Guidelines for Dieffenbachia as reproduced in document TWO/25/3 and additional changes proposed by experts from France and distributed during the session. It finally made the following main changes to document TWO/25/3:

(i) Subject of These Test Guidelines: The second and third sentences to read: "Most existing varieties of dieffenbachia belong to or are mutations of hybrids between the species D. seguine "Amoena," D. seguine "Maculata" and sometimes D. seguine "Jenmannii." However, the following species have been taken into account when establising Test Guidelines: D. chelsonii Bull, D. delecta Nickolson, D. leopoldii Bull, D. oerstedii Schott and D. pittieri Engl & Krause."

(ii) Conduct of Tests: The minimum number of plants to be "20."

(iii) Methods and Observations: Paragraph 2 to read: "For the testing of stability of color, top cuttings of 10 of the supplied plants should be taken and grown for observation. The plants should be grown under conditions of normal growth until they reach commercial standard." In paragraph 4, the last word "leaf" to be replaced by "position."

(iv) Table of Characteristics:

Characteristics

1 To have the states "elongated (1), semi-bushy (2), bushy (3)"

3,5,8,14,17,18,19,58,60,64 To receive an asterisk

11,12 To have the words "of main vein" placed at the end; before these characteristics three new characteristics to be inserted reading:
(i) "Leaf blade: glossiness" with the states "absent, present";
(ii) "Leaf blade: curvature" with the states "weak, medium, strong";
(iii) "Leaf blade: rigidity" with the states "weak, medium, strong"

0499

13 To be deleted

14 To read: "Varieties of type 1 and 2 only: Leaf blade: main color" and to be placed after characteristic 15

15 To have an additional type (without edge or macule) added at the beginning of the states and to have all types renumbered in this characteristic and in all references to a given type

21 to 27, 29 to 51, 57 to be deleted

28 To read: "Varieties of type 3 and 4 only: Leaf blade: dominant green shade represented by macules" with the proposed change of the order of states in this and all other corresponding characteristics; before and after this characteristic the following additional characteristics to be inserted:
(i) "Varieties of type 3 and 4 only: Leaf blade: number of green shades represented by macules" with the states "one, two, more than two"
(ii) Six separate characteristics for varieties of type 3 and 4 only on the absence or presence of additional green shades represented by macules of the following colors: "whitish green, greyish green, yellowish green, light green, medium green, dark green"
(iii)"Varieties of types 5, 6 and 7 only: Leaf blade: number of green shades represented by bands" with the states "one, two, more than two"
(iv) Six separate characteristics as (ii) above but for varieties of types 5, 6 and 7

52 To have the last words read: "...shade represented by band(s)"

58 After this characteristic a new characteristic to be inserted reading: "Petiole: length compared to length of blade" with the states "short, medium, long"

59,65 To have the asterisk deleted

60 To have the first state read "whitish green"

61 To have the words "if clearly different" deleted

In addition to the above changes, several example varieties were added or amended and drawings added.

Items for the Technical Working Party on Automation and Computer Programs

15. The Working Party party had no special item for presentation to the Technical Working Party on Automation and Computer Programs.

Color Observations

16. The Working Party noted document TWO/25/2, containing a draft report of the Subgroup Meeting on Color Measurements held in Hanover, Germany, on January 28 and 29, 1992, as well as document TWA/21/7 containing the results of a one year study on leaf color in ryegrass prepared by experts from the United Kingdom in the Technical Working Party for Agricultural Crops. It furthermore noted document TWO/25/6 as well as an updated list distributed during the session, and documents TWO/25/7 and TWO/25/9 with respect to the grouping of the RHS Colour Chart and prepared by the experts from The Netherlands and Germany respectively.

17. Color groups for naming purposes. The Working Party agreed to combine the groupings for naming purposes of The Netherlands and Germany into one grouping system. The experts from Germany and The Netherlands would prepare a combined proposal for the meeting of the Color Subgroup scheduled for September 30 and October 1, 1993.

18. Colors similar to RHS Colour Chart numbers. The expert from Germany reported on the preparation, for each RHS Colour Chart number, of a list of other RHS Colour Chart numbers which correspond to similar colors. Such lists would enable the screening of varieties by computer and finding varieties with similar colors which then could be compared with the candidate variety. The project would be further discussed by the Color Subgroup during its next session.

18. Color measurements. The Working Party noted the Subgroup report on color measuring and agreed with its conclusion that color measurements should be only an additional tool to support visual assessment of the color. More research and experience would however be necessary, especially with respect to connecting color measurements with the RHS Color Chart numbers. An objective might be to find a formula for UPOV purposes of distinctness, similar to the color formulas used in the industry for color differences. Some experts warned against the risk of finally accepting differences which could no longer be seen with the eye. There was a risk that experts would want to use new methods with certain restrictions but that it would be difficult to justify those restrictions in the presence of a perfectionized method.

New Methods, Techniques and Equipment in the Examination of Varieties

20. Dr. Thiele-Wittig gave a short summary of the discussions held on this subject in the other Technical Working Parties, especially on electrophoresis, color measurements, image analysis, Restriction Fragment Length Polimorphisms (RFLPs) and Random Amplified Polimorphic DNA (RAPDs).

21. The expert from France reported on a project in France linking research in image analysis and colorimetry, bio-chemical research and research in electrophoresis and RFLPs, applied to a single species (roses). In France, breeders took different positions vis-à-vis new methods. Important breeders were in general more open than small breeders, who were afraid of being obliged to apply those methods as well. They also feared that testing fees would be increased if those new methods were introduced. The expert from The Netherlands reported on research in electrophoresis, in-vitro storage and image analysis. The expert from Japan reported that some universities studied color pigments and the National Seed and Seedlings Division had begun studies on electrophoresis and RFLPs. The expert from Australia reported that his Office studied, in cooperation with universities and the CSIRO, molecular characterization via DNA, RFLPs and RAPDs for possible use for DUS tests and in infringement cases. The main reason for selecting these methods was that they were not influenced by environment, latitude, plant stage, etc. The results obtained could be stored and evaluated electronically and were not too expensive. The experts from Canada reported on research in RFLPs by some universities. The expert from Belgium reported on research in HPLC by the State University of Ghent.

22. The expert from Australia stressed the need for UPOV to coordinate, at an early stage, the research for DUS purposes to avoid similar situations as with which the TWA was confronted at present, where for some cereals research in different methods had developed in different directions to such a degree that agreement on one standardized harmonized method within UPOV was now very difficult. The Technical Committee would have to consider those methods in more detail. While some experts disagreed on the need and urgency to deal with the question as the situation varied from species to species, all agreed to present the problem to the Technical Committee for further discussion and some proposed to set up a special working group for this subject.

List of Species in Which Varieties Are Tested

23. The Working Party noted document TWO/25/8 comprising lists of species of ornamental plants tested in the UPOV member States. It expressed its satisfaction with that list, although the information received from some member States did not exactly correspond to what had been intended.

Multi-variate Analysis

24. Dr. Thiele-Wittig introduced the subject and referred in particular to paragraph 17 of document TC/27/9. The Working Party noted that the question was less whether or not to apply the multi-variate analysis but whether distinctness had to be established on the basis of a single characteristic or whether differences of several characteristics could be combined into one clear difference between two varieties. The Working Party noted that some member States had interpreted the Convention by requesting a clear difference in one characteristic--and were thus seeking that difference characteristic by characteristic--while others looked for a clear difference between varieties as a whole, accepting a combination of smaller diffferences in several characteristics to arrive at that clear difference. The question arose whether the latter interpretation did not carry too high a risk of subjectivity on the part of the examiner as to how many small differences would make one clear difference. It was replied that finally it was always one person--be it the examiner from the Office or the judge in the court--who would have to make the judgement and any system had to be such that the possibility of a subjective judgement was reduced to the minimum, but it could never be excluded totally.

25. In order to find out more about the consequences of the different interpretations, the Working Party agreed to search for practical examples of similar rose varieties that carry the risk of opposite decisions depending on the interpretation. It furthermore agreed to rediscuss the whole question during its next session under the amended agenda item "Single Versus Combined Distinctness Characteristics." The experts would search for examples where, in practice, a variety had been rejected in one country and accepted in another on the basis of the difference in interpretation.

UPOV Central Computerized Data Base

26. Dr. M.-H. Thiele-Wittig reported on the history of the discussions on a possible UPOV central computerized data base referring to a questionnaire, the answers to which resulted in document TWC/10/2. He furthermore reported on the results of the discussions on the same subject held in the Technical

0502

Working Parties on Automation and Computer Programs, for Agricultural Crops, for Vegetables and for Fruit Crops. In the Technical Working Parties for Agricultural Crops and for Vegetables a list of minimum information to be included in the UPOV Central Computerized Data Base had been established. It noted furthermore the report of a meeting of a small group of experts held in the Office of UPOV on August 17, 1992. During that meeting selected computer experts, crop experts and experts in administrative and legal matters had discussed on the basis of the list of minimum information and the results of another small questionnaire, further details for a minimum list of information to be included in a UPOV central computerized data base. The amended list is reproduced in Annex II to this report. It further noted that as a result of that meeting, experts from WIPO together with the company which for WIPO prepared the software and is producing the compact disks for the WIPO system of distribution of internaitonal trade mark information on CD will prepare a cost estimate on the setting up of a UPOV central computerized data base for presentation to the Technical Committee, the Administrative and Legal Committee and the Council for further discussion and possible final decision on the setting up of such a data base. The Working Party fully endorsed the setting up of a UPOV data base. The expert from the CEC warned the users of such data bases to be aware of the risks of finding two different varieties under the same name or one and the same variety under different names.

Uniformity of Vegetatively Propagated Species

27. The Working Party recalled document TWO/24/2 on the homogeneity in vegetatively propagated varieties, discussed during its last session. It recalled its decision to apply the tables in document TC/XXV/8 that had a higher population standard for species with higher mutation rates, which would allow for a larger number of off-types. The Working Party was informed of the discussions on document TC/25/8 which took place in the other Technical Working Parties and which resulted in the Technical Working Party for Agricultural Crops in a proposal for replacement of paragraph 28 of document TG/1/2 (General Introduction to the Test Guidelines) for presentation to the Technical Committee for final adoption. The Working Party finally supported that proposal as reproduced in Annex III to this report. It asked however for the inclusion of examples for a population standard of 2%, an acceptance probability of 99% and sample sizes of 5 and 10 plants, which would come closer to reality in ornamental species.

28. Balance between the different risks. The Working Party appreciated the efforts of the TWC to make certain methods better understandable and to highlight the risks as well as the need for a balance between the risks, i.e. that of the applicant to have his variety rejected for lack of uniformity and that of the consumer to have the Office accept a heterogeneous variety as being homogeneous. The Working Party questioned whether the high percentages indicated were applicable to vegetatively propagated species.

29. Stability of varieties. The testing of uniformity of vegetatively propagated varieties led the Working Party to also discuss the stability of varieties and in particular of those varieties in which frequent mutations appeared. Different opinions were expressed as concerns the notion of variety: was it an interaction between the genetic material and the actions of the breeder or was it purely defined by its genetics? In the context of stability, was it sufficient if the breeder could control a certain genetic instability and guarantee uniform and stable plant material in the market (by removing unstable, mutated material before marketing) or had the variety itself to be genetically stable without interference by the breeder? The

majority of the experts took the position that the variety had to be genetically stable. It regretted the decision of the Technical Committee, taken at its last session, admitting that an applicant of a seed propagated Prunus rootstock could select plants for submission for testing, as long as that selection was representative of the variety marketed (see document TC/27/9, paragraph 35). In that case, the interpretation of uniformity of the variety was not the genetic uniformity but the genetic heterogeneity, controlled by the breeder through the selection of uniform plants for testing and for marketing.

Multiclonal Varieties

30. The Working Party noted document TWO/25/5 on the testing of Norway Spruce, prepared by the Office of UPOV, and containing information from several breeders of Norway Spruce and articles on the testing and certification of multiclonal varieties. It also noted that similar discussions were going on in combined meetings of the EEC and the OECD, with the next meeting planned for the middle of November 1992. The Working Party saw no possibility of preparing a document for the testing of clones of forest varieties. It therefore considered the possibility ot establishing Test Guidelines for ornamental clones alone. It asked the expert from Germany, at present the only UPOV member State testing Norway Spruce, to contact Norway Spruce breeders to get their views on the matter. This could be done either directly or by arranging a meeting with breeders and UPOV experts in Hanover and should result in a proposal for the next session of the Working Party. The Working Party also requested the expert from the CEC to inform it of the outcome of the above-mentioned EEC/OECD meetings.

Discussions on Working Papers on Test Guidelines

Test Guidelines for Weigela

31. The Working Party noted document TWO/XXIII/6 containing a working paper on Test Guidelines for Weigela and comments from experts from the United Kingdom made in the past and redistributed during the session. It finally made the following main changes in document TWO/XXIII/6:

(i) Subject of These Test Guidelines: The French expert to check the authors' names for the species indicated.

(ii) Conduct of Tests: In paragraph 3, the second sentence to read: "Preferably top cuttings of herbaceous heads of about 5 cm should be taken after flowering." and the third sentence should be deleted.

(iii) Methods and Observations: The observations on morphological characteristics should be made on 10 one-year-old branches.

(iv) Grouping of Varieties: To have characteristic 8 and the new characteristic on the number of flower colors added as grouping characteristics.

(v) Table of Characteristics:

Characteristics

5,6,7,8,10,11,12,20,21 To receive an asterisk

2 To have the additional states "very weak, very strong"

3 To read: "Plant: growth habit" with the states "erect, weeping, prostrate"

5 The last state to read: "ovate"

6 The word "crenelation" to be corrected to "crenation"

7 To have the states "yellow, green, red" and to have an additional characteristic on the intensity added

8 after this characteristic a new characteristic to be included reading: "Leaf blade: pubescence of lower side" with the states from "absent or very weak" to "very strong"

9,10,11 To be placed at the end of the table

11 To have the word "cropping" replaced by "flowering"

12 To read: "Inflorescence: type" with the states "solitary (1), corymb (2), simple panicle (3), compound panicle (4)" which, however, should be checked by the French expert

13 To be deleted and an additional characteristic with an asterisk to be placed after 12 reading: "Flower: number of colors" with the states "single colored (1), multi-colored (2)"

14 To read: "Flower: hue of main color (on inner side)" with the states "white, yellow, pink, red, purple-red"

16 To have a drawing added and to be checked by the experts from France

17 To have the second state read "divergent"

18,20 To have the word "hairiness" replaced by "pubescence"

18 To be checked by the experts from France whether it should be pubescence or hairiness and if there existed a clear absence

19 after this characteristic a new characteristic to be inserted reading: "Corolla: shape of apex of lobes" with the states "acute, rounded" and to be checked by the experts from France

20 To be checked whether it should be deleted

21 To have the words "length of" inserted before "corolla"

(vi) Literature: To be completed and checked by the Dutch and French experts.

(vii) Technical Questionnaire: To have in paragraph 5 the same characteristics as indicated for grouping.

0505

Test Guidelines for Pyracantha

32. The Working Party noted document TWO/25/11 containing a Table of Characteristics for Test Guidelines for Pyracantha as well as a translation of that table into English distributed during the session, and made the following main changes in the document:

Characteristics

3 To read: "Leaf: glossiness of upper side" with the states "absent, present"

5 To read: "Leaf on mature branch: shape compared to shape of leaf on young branch"

8,12 To have the first state read: "narrow elliptic"

10,13 To have the word "incisions" replaced by "margin"

14 To read: "Leaf on young branch: degree of development of stipules" with the states "weak, medium, strong"; before this characteristic a new characteristic to be inserted reading: "Leaf on young branch: presence of stipules" with the states "absent, present"

15 To be placed at the end of the table

17 To receive a fourth type and a definition of the types; before this characteristic a new characteristic to be inserted reading: "Flower: size" with the states "small, medium, large"

18 To read: "Flower: shape of petals in cross-section" with the states "straight, with inrolled margin, concave"

19 To have the word "aging" replaced by "senescent" and to have the order of the states reversed

21,22 To be placed at the end of the table

23 To have the states "yellow, orange, orange red, red"

24 To receiv drawings and to read: "Fruit: shape of stalk end" with the states "flattened, conical, rounded"

25 To read: "Fruit: opening of calyx end" with the states "absent, present"

26 To read: "Fruit: color of sepals compared to fruit (at fruit ripening)" with the states "similar, different"

27 To be placed before characteristic 26 and to read: "Fruit: conspicuousness of achenes" with the states "inconspicuous, conspicuous"

28 To read: "Fruit: persistance of petals after ripening"

The French expert would prepare a new working paper by the end of the year, completing the remaining parts of the Test Guidelines and, if possible, adding characteristics on resistance if methods are available.

Test Guidelines for Gentiana

33. The Working Party noted document TWO/24/9 and made the following main changes in that document:

(i) Conduct of Tests: As a minimum, each test should include a total of 100 plants for seed propagated varieties and 25 plants for vegetatively propagated varieties.

(ii) Methods and Observations: All observations on the corolla should be made on a fully opened flower at the time of full flowering.

(iii) Table of Characteristics:

Characteristics

3-13 To be observed on main flowering stem, in characteristics 10 to 13 the word "Shoot" to be replaced by "Stem"

4 To read: "Stem: shape in cross-section at half of plant height"

5 To read: "Stem: intensity of green color" with the states "light, medium, dark"

7 To read: "Stem: filling in cross-section in one quarter of plant height" with the states "hollow, filled"

8 To be checked whether to be deleted

10 To be split into two characteristics, one with the states "absent, present", the other with the states from "very few" to "very many"

12,13 To have the states "upper third only, upper half only, along whole stem, lower half only"

14 to 23 To have the word "blade" deleted

16 To have the state "oblanceolate" placed at the end of the states

17 To read: "Stem: position of longest leaf" with the states "upper third, central third, lower third"

18 To have the states "folded up, straight, reflexed"

19 To have the states "concave, straight, convex"

21 To have the word "conspicuous" added before "veins"

22 To read: "Leaf: green color" with the states "light, medium, dark"

24 To be split into two characteristics, both with asterisk, the first reading: "Inflorescence: distribution of flowers" with the states "single, clustered" and the second reading: "Inflorescence: position of flowers" with the states "only terminal, terminal and axillary"

25 To read: "Plant: sequence of flowering" and the wording of the states to be checked and possibly changed to "acropetal, (middle to upper and lower), basipetal, simultaneous"

0507

26 To read: "Number of terminal flowers (clustered varieties only)" and to be checked again

27 To read: "Number of flowers at central flowering node"

31 To read: "Flower: length"

33 To read: "Corolla: diameter at distal end"

34 To read: "Corolla: curvature of lobes"

35 To read: "Corolla: color of upper part of inner side"

36 To read: "Corolla: color of middle part of inner side"

37 To read: "Corolla: color of outer side"

41 To be deleted

44 To have the third state deleted

45 To have the second state read: "always five"

48 To have the states "narrow triangular, triangular, broad triangular, ovate, obovate"

49 To be deleted

51 To have the states "acute, truncate, concave, split"

52 to 57 To have the word "Sepal" replaced by "Calyx"

52 To be placed after characteristic 57 and to read: "Calyx: shape of lobe"

53 To read: "Calyx: intensity of green color" with the states "light, medium, dark"

59 To read: "Anther: development" with the states "rudimentary, partly developed, fully developed"

61 To have the asterisk deleted and to read: "Flowering under low light intensity"

Test Guidelines for African Violet (Revision)

34. The Working Party noted document TWO/25/4 and a list of example varieties distributed during the session. It finally made the following main changes in document TWO/25/4:

(i) First page: To have the word "ionantha" deleted

(ii) Conduct of Tests: Paragraph 3 to start as follows: "3. The tests should be carried out under conditions ensuring normal growth (conditions for the Northern Hemisphere): Mother plants: Submission mid-August. Same conditions as culture conditions for young plants below. Propagation: Beginning of September: Saintpaulia ionantha hybrids and medivarieties..." The irrigation requirements to be: "Warm water (22°C), initially in pots, from bud developments on bench irrigation." The temperature to be: "20°C, plants covered until bud development."

(iii) Grouping of Varieties: Paragraph 1(iii) to be replaced by paragraphs 5.5 and 5.6(ii) of the Technical Questionnaire.

(iv) Table of Characteristics:

Characteristics

1 To read: "Plant: diameter" with the states "small, medium, large"; before this characteristic a new characteristic to be inserted reading: "Plant: type" with the states "miniature, non-miniature"; the characteristics mentioned in paragraph VI(2) as well as characteristic 45 should be split in two characteristics, one for miniature and the other for non-miniature varieties

4,5,10,11,26,33 Each to be split in two characteristics, one for the absence or presence of anthocyanin coloration, the other for the intensity

9 To have the word "green" of the states incorporated in the characteristic

13 To be deleted; the new characteristic after 13 to have the word "form" replaced by "shape"

16 To have the asterisk deleted as well as the state "broad pointed"

17 To have the Notes "1, 2, 3"

38 The characteristic inserted before characteristic 38 to read: "Petal: number of colors" with the states "selfcolored, bicolored"

40 The first characteristic inserted after characteristic 40 to be split into two characteristics, one on the distribution on each petal, the other on whether distributed on all petals or only on the upper two petals

37 To be split in two characteristics, one with the states "single, double" and the other on the number of petals

38,39,40 To have the words "single colored" replaced by "selfcolored" with the understanding that there may be different shades of the same color present

42 To read: "Petal: undulation of margin"

(v) Technical Questionnaire: In paragraph 5, both split characteristics 10 and 37 and the first characteristic inserted after characteristic 40 to be included, as well as the cultural type.

Status of Test Guidelines

35. The Working Party agreed that the draft Test Guidelines for Aster and Dieffenbachia should be sent to the Technical Committee for final adoption.

36. The Working Party agreed that the draft Test Guidelines for African Violet (Revision) should be sent to the professional organizations for comments.

37. The Working Party agreed that the Test Guidelines for Weigela, Pyracantha and Gentiana would require further discussion during its next session. Lack of time did not allow the Working Party to discuss the remaining working papers for Test Guidelines mentioned under item 15 of the Agenda.

Future Program, Date and Place of Next Session

38. At the invitation of the expert from France, the Working Party agreed to hold its twenty-sixth session in Antibes, from October 4 to 8, 1993. The Subgroup on Color would meet at the same place on September 30 and October 1 (instead of February 11 and 12), 1993. It was planned that the following items would be discussed during the coming session of the Working Party:

(i) Short reports on special developments in plant variety protection for ornamental plants and forest trees (oral reports);

(ii) Important decisions taken during the last sessions of the Technical Working Party and the Technical Committee (reports from TWO and TC);

(iii) Final discussions on Draft Test Guidelines for African Violet (Revision) (TG/17/4(proj.));

(iv) Color observations (report from Color Subgroup);

(v) New methods, techniques and equipment in the examination of varieties (FR to collect publications);

(vi) Lists of species in which varieties are tested (UPOV to collect updatings of document TWO/25/8 + list of existing national test guidelines);

(vii) Single versus combined distinctness characteristics (FR to prepare examples of close rose varieties in the field);

(viii) Central computerized data base (oral report);

(ix) Uniformity of vegetatively propagated species (report from TC);

(x) Multi-clonal varieties (report from Subgroup meeting in DE);

(xi) General Test Guidelines for ornamental species (IL to prepare a working paper);

(xii) Cooperation with breeders in the testing of varieties (AU to prepare a summary of the testing system in Australia);

(xiii) Discussion on working papers on Test Guidelines for:

a) Weigela (FR to collect comments)
b) Pyracantha (FR to prepare new working paper)
c) Iris (Annex III to TWO/24/12 Prov. + IL to prepare new working paper)
d) Kangaroo Paws (TWO/24/3 + AU to prepare new working paper)
e) Gentiana (JP to collect comments)
f) Limonium (Annex IV to TWO/24/12 Prov.+ IL to prepare new working paper)
g) Chrysanthemum (Revision, TG/26/4, United Kingdom to prepare a working paper)

0510

h) Lavender and Lavendine (FR to prepare a working paper)
i) Kalanchoe (Revision) (DE to prepare a working paper)
j) Rhododendron (Revision) (DE to prepare a working paper)
k) Firelily (Cyrtantus) (ZA to prepare a working paper)
l) Geralton Waxflower (Chamelaucium) (AU to prepare a working paper)
m) Nerine (NL to prepare a working paper)

39. With respect to the list of species annexed to the EEC Directive on the marketing of ornamental plant material, the Working Party noted that it had established Test Guidelines for all but two species (Phoenix and Pinus nigra). The expert from the CEC would enquire with experts from Spain and Italy if there was a need to prepare Test Guidelines also for those two species.

40. The Working Party noted an advance invitation to hold its 1994 session in Australia, in conjunction with a session of the Technical Working Party for Fruit Crops scheduled to be held in New Zealand.

Visits

41. During the meeting, mainly in the afternoons or after the meeting, the Working Party had several official visits, partly together with experts of the Technical Working Party for Fruit Crops, as several of the visits were organized for experts of the two Working Parties together. They are listed in their chronological order.

(i) In the afternoon of August 25 the experts visited the experimental farm of the Institute for Tropical and Subtropical Crops (ITSC) at Burgershall. It had a field tour to experimental sites of subtropical crops such as avocado, banana, coffee, tea, herbs and spices.

(ii) In the afternoon of August 26 the Working Party visited the ITSC headquarters at Nelspruit, where it heard a lecture on the citrus superplant scheme and saw the tissue culture laboratory, the electrophoresis laboratory and orchards of citrus, litchi, and a variety of minor crops.

(iii) In the afternoon of August 27 the Working Party visited the Van Rooyen's Orchid Farm at White River with their large variety of orchids. Their main objective was to breed new varieties of Paphiopedilum for the cut flower export market. Interesting new cut flower hybrids within different genera of the orchid family were made, especially for the interest of the hobbyist grower of plants. Van Rooyen's also had a collection of indigenous as well as exotic species, which they were self-pollinating in order to select superior clones. Pure species having become very important to orchid collectors resulted in the advantage of preserving a large gene pool in cultivation.

(iv) In the morning of August 29 the Working Party made an excursion to a banana production area and visited the Oude Werf Banana Packhouse, a private enterprise of 120 ha. It also had a guided tour through the Oude Werf farm garden with its display of subtropical ornamental plants such as palms, cycads, bromeliads, acalyphas, crotons, indigenous trees, etc., as well as an excursion along the Drakensberg Escarpment with its indigenous mountain flora and forestry plantations. Indigenous South African ornamentals of special interest were those able to provide an interesting silhouette in a garden, such as Cussonia paniculata, Euphorbia ingens, E. cooperi, and other Euphorbia species. Clivia miniata and the tree fern, Cyathea dregei, as well as some Transvaal Protea species, were seen in their natural habitat. Other ornamentals of interest, which are practically unknown in cultivation, were for example Combretum microphyllum, Greyia radlkoferi, Rhigozum sp., etc.

0511

(v) On August 31 the Working Party had a visit of the Quarantine Station in Stellenbosch with an introduction to the Variety Control Section and an information and demonstration session of the progress and problems of electrophoresis, as well as visits to the Nematology, Bacteriology and Virology Sections responsible for the sanitary status of plant material. The morning visits ended with a tour of the Vredenburg Experimental Farm, followed by a visit to the South African Plant Improvement Organisation (SAPO). In the afternoon the Working Party received a lecture on wine and table grape varieties in the Bergkelder Wine Cellar.

(vi) On September 1 the Working Party visited the Hopefield Wildflower Show, where 242 of the local 370 indigenous flowering plant species, occurring within a radius of 40 km, were on display. From there, the Working Party visited the Postberg Nature Reserve at Langebaan where the West Coast wildflowers could be seen in their natural habitat.

(vii) On September 2 the Working Party continued its visit to the West Coast wildflower area. This area is part of the rich gene pool that South Africa has for many plant species known in cultivation elsewhere in the world. In the afternoon, the Working Party visited the Nietvoorbiy Institute for Viticulture and Oenology (NIVO) at Stellenbosch, the only breeding station for table grapes in South Africa, where lectures were heard on the conventional and biotechnological breeding programs for table grapes.

(viii) On September 4 the Working Party visited the Elsenburg Development Insitute where it heard a lecture on Protea breeding and the development of the International Cultivar Registration system for Proteas. The Working Party also visited the glasshouse for breeding indigenous bulbous plants such as Gladiolus and Ornithogalum. It also saw the Protea gene bank collection and had a tour through the Protea orchards. In the afternoon it had a guided tour through Kirstenbosch. Some sections of the garden were visited, as well as the nursery area, housing a vast collection of indigenous succulent plants.

(ix) On September 6 some experts followed an optional guided tour to the Cape of Good Hope Nature Reserve where a large number of ornamental fynbos species were identified. This tour was concluded with a scenic drive to Cape Town Harbour.

42. This report has been adopted by correspondence.

[Three annexes follow]

0512

ANNEX I

LIST OF PARTICIPANTS AT THE TWENTY-FIFTH SESSION OF THE TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES, STELLENBOSCH, SOUTH AFRICA, AUGUST 27 TO SEPTEMBER 7, 1992

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0513

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[Annex II follows]

ANNEX II

0514

UPOV Central Computerized Data Base

LIST OF MINIMUM INFORMATION TO BE INCLUDED
IN THE UPOV CENTRAL COMPUTERIZED DATA BASE

Latin Name

ID Number (Application/Registration No.)

Country (Source of Information)

Breeder's Reference

Capacity of Person	Name	Address
- Applicant		
- Breeder		
- Holder of Right		
- Maintainer		
- (Other)		

Designation	Status	Date
	Proposal*	
	Approval*	
	Rejection*	

Type	(Administrative) Event	Date
- PBR	Application*	
- NL	Protective Direction	
- Other	Prior Commercialization	
	- within State	
	- outside State	
	Priority Date	
	Objection*	
	Decision (Grant/Refusal)*	
	Termination or Withdrawal*	

Remarks

* Plus publication where and as long as relevant

[Annex III follows]

ANNEX III

Uniformity of Vegetatively Propagated Species

Proposal of the Technical Working Party for Agricultural Crops for the replacement of paragraph 28 of document TG/1/2:

For vegetatively propagated and self-fertilized species the sample size and the maximum number of off-types will be given in the individual guidelines and are based on the tables of document TC/XXV/8. The crop experts choose the appropriate table when preparing the guidelines by first fixing the population standard, i.e. the maximum percentage of off-types that is allowed if the whole population could be examined. Then the acceptance probability--i.e. the probability that a variety having P% of off-types is correctly considered uniform--and the sample size are chosen. Small sample sizes increase the risk of accepting heterogeneous varieties.

Examples:

Population standard "P"	Acceptance probability	Sample size	Maximum number of off-types allowed	Risk of erroneously accepting a heterogeneous variety with, for instance, x% off-types	x
1%	95%	10	0	60%	5
1%	95%	20	0	36%	5
1%	99%	100	3	26%	5
0.1%	99%	1000	3	1%	1
0.1%	99%	2000	5	0.1%	1

[End of Annex III and of document]