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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

**TECHNICAL WORKING PARTY
FOR
ORNAMENTAL PLANTS AND FOREST TREES****Thirty-First Session
Christchurch, New Zealand, November 16 to 21, 1998**

REPORT

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

Opening of the Session

1. The thirty-first session of the Technical Working Party for Ornamental Plants and Forest Trees (hereinafter referred to as "the Working Party") was held at Christchurch, New Zealand, from November 16 to 21, 1998. The list of participants is presented in Annex I to this report.
2. Mr. Neville Harris, Deputy Secretary of Commerce, welcomed the participants to New Zealand. The session was opened by Mr. Joost Barendrecht (Netherlands), Chairman of the Working Party.

Adoption of the Agenda

3. The Working Party unanimously adopted the agenda for its thirty-first session which is reproduced in document TWO/31/1 Rev.

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

4. The Working Party received short reports from a number of countries. Most of them reported on the preparation or adoption of new legislation to introduce the 1991 Act of the UPOV Convention and on the opening up of the system to the whole plant kingdom. The States of the European Union reported on some slight increase in applications for plant variety protection which had dropped considerably after the opening of the Community Plant Variety Office (CVPO). In some of these countries the national applications were still neglectably low. Applications for protection for ornamental varieties in almost all countries were more than half of the total applications received, in many cases more than 60%, in Japan even 84% of the applications. In the CPVO more than 1000 applications were received per year for ornamental varieties. In France there was a considerable increase in applications for shrubs and seed propagated varieties, in the Netherlands a large increase in applications for tulips had been noticed. The experts from Korea reported on the introduction of plant variety protection in Korea in 1997 and on the starting of a Plant Variety Protection Office.

The Use of Image Analysis in the DUS Testing of Ornamental Plants

5. The Working Party noted paragraphs 7 to 10 of document TWO/30/12, and noted that the planned progress had not been achieved. Therefore, the meeting foreseen for November of this year had to be cancelled. But work will go on; it is now planned to incorporate discussions on the results in the next session of the Working party itself. The subgroup comprised at present experts from Germany, France, the Netherlands, the United Kingdom, but other States are also invited to join. Monday morning of the next session will be dedicated exclusively to image analysis.

Important Decisions Taken During the Last Sessions of the Working Party, the Technical Working Party on Automation and Computer Programs (TWC) and the Technical Committee

6. Mr. M.-H. Thiele-Wittig presented a brief report on the main items discussed during the previous session of the Technical Committee and referred participants needing further details to the full report reproduced in document TC/34/10.

Application of COYD and COYU Analysis

7. The Working Party noted that the Technical Committee, while agreeing that several experts had still to gain experience in the application of COYD and COYU analysis for further species, had insisted that the document as reproduced in TC/33/7 had been adopted for use for cross-fertilized species and that no alternative strategy should remain; efforts should rather be made to apply the document. Where there were too few varieties, the document would offer an alternative to the criteria of the long-term LSD. Moreover, if TWC experts were sent to sessions of other Technical Working Parties, the method would finally gain better acceptance by the various Technical Working Parties.

8. The Working Party expressed its concern that a method, which had originally been prepared and accepted to solve some difficulties in cross-fertilized grasses, had been extended step by step to all cross-fertilized agricultural species, then to all cross-fertilized species and was now recommended also for all cases of measurements. It had nothing against special requirements of experts of certain groups of species to solve their problems, but did not wish that methods needed by a small group to be successively imposed on all experts of all species without any need.

9. The Working Party repeated its arguments that the COY analysis was unsuited for ornamental species and that it would not use it. As its voice had not been heard or had been ignored in the past, it discussed at length how it could convince the Technical Committee of its arguments and the impossibility of the application of the COY analysis.

10. During the discussions it was pointed out that there was a big difference in the testing of varieties of ornamental species compared to the testing of agricultural species. In agricultural species the variety characteristics were observed and a description was made first and thereafter the distinction was made based on the description and further judgments on those characteristics in which the description showed some difference, if needed, and in cross-fertilized grass species on the basis of measurements and their statistical evaluation. In ornamental species the approach was the opposite. The expert would first observe the variety and take a decision on distinctness (and uniformity). This would be done visually and only in extreme cases would measurements be taken. These cases would be less than 1%. For one country it was reported that only one case had been noted in 25 years in which measurements were needed to take a decision on distinctness. In these few cases other simpler statistical methods as the t-test or the LSD would be more than sufficient. In addition, the layout of the trials was not randomized, and there was no justification for randomization only for one case in 25 years.

11. On the other hand, several experts wondered whether they needed to have recourse to such refined methods as the COY, because varieties which could not be distinguished otherwise might indicate that experts had gone too far or were close to going too far in distinguishing varieties which should not be granted separate rights.

Improvement of Document TWC/11/16 on the Testing of Uniformity of Self-fertilized and Vegetatively Propagated Species

12. The Working Party noted that the Technical Committee finally approved document TC/34/5, which would replace the former document TWC/11/16 for the testing of uniformity of self-fertilized and vegetatively propagated varieties, subject to a few changes and corrections. The Working Party also noted the existence of an older document, TWC/14/4, which would provide additional explanations on the use of the former document TWC/11/16 that would themselves be applicable in the same way to document TC/34/5.

Definition of Off-type, Admixture

13. The Working Party noted that the Technical Committee approved the following definition of off-type:

“Any plant is to be considered an off-type if it can be clearly distinguished from the variety in the expression of any characteristic of the whole plant or of part of the plant, used in the testing of distinctness, taking into consideration the particular species.”

With the adoption of this definition, the Technical Committee wanted to make it clear that the same criteria would apply to the definition of off-types as to the testing of distinctness. With respect to the definition of admixtures, the Technical Committee followed the proposal of the TWA which tried to avoid the term admixture and therefore the need for further definition, and agreed to the following sentence:

“Plants that are very different from those of the variety could be disregarded as long as their number does not interfere with the test.”

In choosing the phrase “could be disregarded,” the Technical Committee stressed that it would depend on the judgment of the crop expert whether they were disregarded or not. That would mean in practice that in horticultural species with a low number of plants just one single plant would interfere with the test and could not be disregarded.

14. The Working Party approved the definition of off-type but regretted that it was expressed in a way which could be interpreted differently, especially the part “of the whole plant or of part of the plant.” It was meant from the Working Party’s point of view to state that a difference seen on an organ on one part of the plant without being seen on all of those organs would make the plant an off-type. It could, however, also be interpreted to mean characteristics of the whole plant like “habit” compared to characteristics of part of the plant like “leaf.” The Working Party tried to improve the wording and discussed different new drafts but could not finally agree on a final version and therefore asked only to inform the Technical Committee on its discussions. The last proposals which found support from a large part of the Working Party, but also opposition from some, read: “Any plant is to be considered an off-type if it can be clearly distinguished from the variety in the expression of any characteristic used in the testing of distinctness, whether expressed on all organs to which its expression refers, or even only on one or several organs of that plant, taking into consideration the particular species.”

Prescreening of Varieties

15. The Working Party noted that the Committee had noted the report on the discussions that took place on prescreening in the various Technical Working Parties. It had noted that the Technical Working Party for Fruit Crops (TWF) and the Working Party had taken a rather strict line agreeing that methods not included in the Test Guidelines should only be admitted for screening if a strong correlation existed between the characteristic in question and morphological or physiological characteristics used in the Test Guidelines. The experts from the Technical Working Party for Agricultural Crops (TWA) in particular had stressed that there was an urgent need to find a way of coping with the large number of possible example varieties in order to reduce that number to a reasonable level, thereby striking a balance between the risk of not including a variety and the costs and workload involved in unnecessarily including it. The expert from France had introduced document TWA/26/5, on a

possible method for the setting-up and use of reference collections for DUS testing. The Committee had also noted that in document TWA/26/10 experiences were reported in the prescreening of varieties of *Poa pratensis* that could be regarded as vegetatively propagated.

16. In order to make progress in the discussions, the Committee had agreed that some concrete cases would have to be selected and the whole problem would have been further investigated on the basis of them. It therefore had eventually proposed to ask all Technical Working Parties to re-discuss the question of prescreening and to cite examples that would support their position. For the TWA, the species *Poa* and potato were mentioned as possible examples, and for the Working Party, roses. For roses there was already a good deal of additional information that would be helpful. In addition, the Technical Committee had underlined the importance of ornamental varieties and the international trade in them. For the TWF, the species peach had been mentioned.

17. The Committee had also agreed, and the Working Party followed that agreement, that, in addition to developing models for the prescreening of varieties, it was very important to have an intensive exchange of information between the testing stations and the offices of member States. Only if they were able to know what varieties were protected or tested in other member States would they be able to check a complete collection of varieties to find all similar varieties which should be compared with a candidate variety.

18. The Working Party stated that roses might be the most suitable species for the study on prescreening as testing was done in several States. As a second species, chrysanthemum was proposed. The Working Party stated, however, at the same time that it was worried about the intentions behind the whole question of prescreening. It was not at all convinced that it would lead to useful results. Why should characteristics other than the grouping characteristics or at least characteristics included in the Test Guidelines be used at all for prescreening? The characteristics of the Test Guidelines would be sufficient for prescreening and thus there was no need to search for other characteristics. In addition, for many ornamental species with vegetatively propagated varieties, the variety collection had to be grown anyhow and therefore little savings could be expected and the interest in prescreening was reduced. For other species more studies would be necessary. However, also for prescreening, new characteristics from electrophoresis or DNA profiling should not be used unless there was a strong correlation with existing morphological or at least phenotypical characteristics. For ornamental varieties, a picture of the most typical organs of the variety, next to the grouping characteristics, would be the most useful tool.

Status of the UPOV Test Guidelines

19. The Working Party noted that the Technical Committee had discussed the status of the UPOV Test Guidelines. It noted the only binding obligations on UPOV member States were those contained in the text of the Convention itself. UPOV could moreover only make recommendations on that text or prepare guidelines for the interpretation of the legal obligations. The UPOV Test Guidelines were intended to give guidance for the interpretation of Articles 7, 8 and 9 of the 1991 Act of the Convention. Their purpose was to ensure that the Articles in question were applied in as harmonized a form as possible and that decisions were taken in a similar way leading to same or similar results.

20. How far the UPOV Test Guidelines were reflected in national practice or national law depended on the individual situation in each member State. In practice, the UPOV Test Guidelines were taken over in many member States entirely without any change (no deletion of characteristics, no addition). In other member States, all characteristics with an asterisk and a selection of those without an asterisk were taken over. As they were not exhaustive, further characteristics were added in still others. In principle, the UPOV Test Guidelines were broadly accepted and guaranteed on account of the broad participation in their preparation and continuous updating, which also proved their quality. The use of the UPOV Test Guidelines was independent of whether a given State had a system of official tests done by government testing authorities or a breeder testing system. Applicants and breeders also used them.

Extended Testing on the Initiative of the Testing Office

21. The Working Party noted that the Technical Committee had difficulty in accepting that it would be left to the testing expert to decide whether further tests should be made without a special request from the applicant where the usual characteristics were not sufficient to establish distinctness. After a detailed discussion, the Chairman of the Technical Committee finally concluded by proposing that the Test Guidelines should be very well prepared so that the need to include new characteristics in the list might be avoided. That list of characteristics should then be kept for several years. If there was an obvious omission or a need to include further characteristics, the other offices should be informed of the inclusion, and it should be discussed in the Technical Working Party concerned. One should avoid searching for a difference for its own sake because, if one really looked for a difference, a small one would eventually be found. The whole question should be discussed further with breeders and other crop experts in the various Technical Working Parties. It was important to keep the spirit and the quality of the Test Guidelines in mind as, without that spirit and that quality, there was reason to wonder where unlimited deviation from the Test Guidelines would eventually lead.

22. The Working Party agreed to the interpretation of the Technical Committee but required the freedom to use additional characteristics at any time considered necessary. However, three different types of additional characteristics were considered (i) characteristics existing before but so far not used (e.g. color of style), which would as a result reduce the scope of the already existing variety if protected and thus would not be recommended; (ii) characteristics not existing before which were detected or bred for the first time and whose use was considered completely justified; (iii) new characteristics from new methods (e.g. electrophoresis) the use of which should first be agreed upon by UPOV and the Working Party.

23. Several experts followed the position of the Technical Working Party for Fruit Crops (TWF) that it was easier for a given State to select from a larger list of varieties those characteristics apt for its testing than to add additional characteristics to a reduced list. They therefore recommended not to delete or refuse inclusion in new Test Guidelines of any characteristic which might not be needed in one region of the world but might be useful in another. This was mainly addressed to those countries or regional grouping which had decided to use all characteristics in the UPOV Test Guidelines, also all non-asterisk characteristics and thus aimed at keeping the total number of non-asterisk characteristics as low as possible.

24. The Working Party finally agreed that more exchange of information was necessary among the experts and that the use of additional characteristics should be communicated to the Working Party or other experts testing varieties of the same species in other countries.

25. In order to find out how far the number of characteristics actually used in each member State differed from the adopted UPOV Test Guidelines, how many and which of the characteristics from the non-asterisk characteristics had been selected and which additional characteristics had been used, the Working Party agreed to select the species rose and carnation and to ask all member States to submit to the Office of UPOV their list of characteristics actually used for the testing, including characteristics needed only once or twice in special cases. The Office of UPOV was asked to prepare a circular for that purpose.

26. The Working Party insisted on the fact that the main aim of the Test Guidelines was to ensure a harmonized description. They were helpful for the establishing of distinctness, but they were only one step in that direction and alone would never be enough to establish distinctness.

27. In this respect they were especially concerned that some States used the Test Guidelines directly for the establishing of distinctness in applying the rule that a difference of one state of expression in a qualitative characteristic was sufficient for distinctness and a difference of two states in the case of quantitative characteristics. This was considered by the Working Party as completely unacceptable.

28. With very few exceptions, such as ploidy and a few other characteristics, the majority of the characteristics (about 95% of all characteristics or more) were no true qualitative characteristics but only quantitative characteristics expressed in a qualitative way. Even color or shape characteristics were in the majority quantitative characteristics although they often gave the impression of true qualitative characteristics. The application of the rule of one state difference in the description for distinctness was therefore a very dangerous rule. All the more since quantitative characteristics were presented in a qualitative way purely for practical purposes of the examiner.

29. The rule of using the variety description based on the Test Guidelines especially for quantitative characteristics and applying a rule of two states of expression difference for distinctness throughout the characteristics and throughout the species was also unacceptable. The Notes in the Test Guidelines were only given in order to harmonize variety descriptions; they said nothing on distinctness. Depending on the species, on the characteristics, on the year, on the testing place, or on the growing conditions, etc., two varieties might be distinct in a given characteristic even if in the description they had the same Note and in case of large variation they might not be distinct if the difference in the description was 3 or 4 or even 5 or more Notes if there was really large variation.

30. The Working Party wondered how such a rule could have ever developed and stressed that the function of the Test Guidelines for harmonizing variety description should be strictly separated from the judgement of distinctness (and uniformity). To avoid future confusion, perhaps this should be made more clear in the title itself or in an explanatory footnote to the table.

31. The danger of misuse was even greater after the recent decision of the Technical Committee to allow for some characteristics, like attitude, the indication of only half of the scale, e.g. with the states “erect (1), erect to semi-erect (2), semi-erect (3), semi-erect to horizontal (4), horizontal (5).” The experts in the Technical Working Party for Vegetables (TWV) were all of the opinion that the characteristic was still a quantitative characteristic and only represented half of the scale of a quantitative characteristic with the states from 1 to 9. Some other experts, however, considered the above states to represent a qualitative expression with all its consequences if the Notes of the Test Guidelines were misused for the judgement of distinctness. It was, therefore, in addition to the clarification of the role of the Test Guidelines of utmost importance to define beyond any doubt and misunderstanding what was a qualitative and what a quantitative characteristic.

Variety Denominations and Trademarks

32. The Working Party noted that the Technical Committee had stressed the obligation under the UPOV Convention to use the denomination in relation to the selling and marketing of the variety. The Committee was of the view that any highlighting of the trademark in the Technical Questionnaire would only reduce the value of variety denominations. It was necessary to impose the use of the variety denomination and therefore no question on trademarks should be included in the Technical Questionnaires.

Question, in the Technical Questionnaire, on the Status of the Variety under the Legislation on the Protection of the Environment and on Human and Animal Health

33. The Working Party noted that the Technical Committee confirmed, as already mentioned in the report on the last session of the Committee, that all Test Guidelines would in future contain a question in the Technical Questionnaire requiring the information referring to the status of the variety under the legislation on the protection of the environment and on human and animal health. It noted that the Technical Working Party for Fruit Crops (TWF) and Technical Working Party for Vegetables (TWV) had agreed to recommend a separation of the request for information on release from that on the origin. It agreed that the information be separated but, in the same way as the TWF (see also paragraph 61, last subparagraph), did not pronounce on the manner.

Judgement of Vectors (Phytoplasm)

34. The Working Party noted that the Technical Committee had discussed the effect of phytoplasm in varieties of *Euphorbia*. It was first clarified that the term “vector” was wrongly used and should be replaced by phytoplasm or endophyte. After having heard explanations on the details as reproduced in document TC/34/7, the Committee agreed quite rapidly that the inclusion of phytoplasm in a cell was an infection of the plant material which could be removed, and therefore should not be considered part of the cell DNA. A candidate variety that differed from another variety only as a result of the introduction of the phytoplasm was therefore not considered a new variety and would therefore not qualify for separate plant variety protection. The Technical Committee also noted that there might be many different varieties for which plant variety protection had been granted where differences might be

caused only by that phytoplasm. However, as long as that fact was not known, there was no consequence. Should it become clear that the phytoplasm was the only difference, the protection of the variety would have to be withdrawn.

35. The expert from Germany reported that on the basis of the position of the Technical Committee they had requested information from their legal adviser. They could not find any legal justification to not grant protection although the difference was only caused by an endophyte. Therefore, in the meantime three varieties of that type had received plant variety protection in Germany.

36. In the ensuing discussions the experts in the Working Party were split. Some followed the German interpretation, some the interpretation of the Technical Committee, others were undecided. As arguments for or against the different positions, the following were mentioned:

37. The comparison with the virus infection was wrong. The virus would weaken the plant. It would use the protein of the cell and control the protein synthesis and in many cases would finally destroy the plant. There was often not only one single pattern but several patterns. It would not cause uniform changes but plants would have different degrees of virus infection. The endophyte would produce hormones that finally would produce branches and create one single and uniform expression in all plants.

38. The endophyte was more comparable to a gene introduced into the cell by genetic engineering, although it was not in the nucleus but in the plasma.

39. After crossing the endophyte would be found back in the seed. It was thus behaving as other genetic material of the cell and would be inherited by the offspring. Only heat or chemical treatment of the seed might remove it. The endophyte might be compared to chimera varieties. In both cases the variety consisted of two genotypes, in the case of chimera of two different cells, in case of an endophyte of one genotype in the cell of another.

40. The criterion of easy removal was not correct. An endophyte could not be removed as easily as a virus. In the end also a gene introduced by genetic engineering could be removed from the cell. A chimera could also be separated easily in a cell culture.

41. In some countries endophytes had received protection separately from the variety (of ryegrass). In a chemical test the activity of the endophyte could be measured. In ryegrass it had little effect on the biochemical distance and ryegrass varieties with different endophytes had been protected.

42. The Working Party agreed that all depended on the definition of variety. In the UPOV Convention a variety was defined in such a way that it could have one or more genotypes. Most experts in the drafting procedure of the text of the convention might have had in mind cross-fertilized varieties, but others might have thought also of chimera. Therefore at present endophytes might be a further example.

43. In order to supply the Technical Committee with more information for its next session, the Chairman of the Working Party will prepare together with the experts from Germany, Australia and from the Community Plant Variety Office (CPVO) a document by the end of January 1999 which will compile more information and arguments.

List of Varieties Under Test

44. The Working Party noted that the Technical Committee had approved the proposal by the Working Party that the exchange of tables with lists of varieties under test in the individual member States be abolished as that information could be easily retrieved from the UPOV-ROM and that it had proposed that the UPOV Office increase the number of copies given free of charge to each member States from five to seven.

UPOV Documents in Electronic Form

45. The Working Party confirmed its interest in obtaining more documents in electronic form. It noted that the UPOV Test Guidelines might soon be available in electronic form, namely on a CD-ROM. It also noted that the Office of UPOV planned to set aside an open and a restricted area on its home page for the reproduction of certain documents.

Application of Recommendations on Variety Denominations

46. The Working Party noted that the Technical Committee had discussed the problem of some breeders systematically applying for different variety denominations for the same variety in different countries. The only way to stop that practice would be a full exchange of information between the member States and the publication of the different synonyms.

A New Version of the DUSTX Package and a Prototype DUSTX for Windows

47. The Working Party noted that the Technical Committee welcomed the new version of the DUSTX package and the prototype produced for Windows. It recommended broader use of that freely available software which would ensure more harmonized evaluation of data. The new DUSTW version to run under Windows is expected to be available before the end of the current year.

Telecommunications, Exchangeable Software and Contacts

48. The Working Party noted that the Technical Committee welcomed document TWC/15/9 which contained information on the e-mail addresses of participants in UPOV Technical Working Parties, while information on database management systems in use in the UPOV member States was to be found in document TWC/15/8 and information on exchangeable software in document TWC/15/10. It supported the proposal by the TWC that more States should supply such information to the expert from the United Kingdom. The Working Party further noted with appreciation that the above information was also available on the Internet and would be regularly updated by experts from the United Kingdom (<http://www.bioss.sari.ac.uk/links/upov/upov/upov.html>).

List of Species in Which Practical Technical Knowledge Has Been Acquired

49. The Working Party noted that the Technical Committee had welcomed document TC/34/4, which contained an updated version of the list of species in which practical technical knowledge had been acquired. It asked all member States to provide the Office of UPOV with any new information for the updating of that document.

Chairmanship of the Technical Committee

50. The Working Party noted that the Technical Committee had proposed to the Council, in view of the expiration of the chairmanship of Mr. Joël Guiard (France) with the closing of the ordinary session of the Council in October 1998, that it elect Mrs. Elise Buitendag (South Africa) as new chairman and Mr. Raimundo Lavignolle (Argentina) as new vice-chairman of the Technical Committee. It further noted that the Council had elected Mrs. Buitendag as chairman of the Technical Committee and Mr. M. Camlin (United Kingdom) as vice-chairman since Mr. Raimundo Lavignolle had taken up a post in the Office of UPOV.

Testing of Seed-propagated Varieties of Ornamental Species

51. The Working Party noted that the Technical Committee had noted the discussions held in the TWO to investigate possible ways of cooperating with the Fleuroselect system. It had noted that the trial fields used for the comparative trials of new varieties undertaken by breeders of Fleuroselect had been considered to be in good shape, had a good reference collection and showed good variety knowledge, but the criteria were rather close to agronomic value. But in the end, the Working Party had only been able to recommend to individual offices that they consider whether possibilities for cooperation existed at the national level, with Fleuroselect trials being used as a second trial and the testing period being shortened thanks to the information gained from them. The expert from ASSINSEL had insisted that it was very important to continue discussions with Fleuroselect. The Committee had agreed that it would welcome reports on the follow-up to the cooperation at the national level.

52. The Committee had also noted the problems encountered when, in a species in which so far varieties had been propagated vegetatively, the first applications for seed-propagated varieties were received. The expert from ASSINSEL had recalled that, according to the UPOV Convention, the uniformity of a variety had to be judged according to the manner of its propagation. If the national authorities applied the same criteria as for vegetatively propagated varieties, they would prevent any seed-propagated variety from obtaining protection. The Chairman of the Committee had concluded the discussions by stating that, in spite of the fact that document TC/34/8 contained many details on the special case of *Pelargonium*, there were too many questions still open, for instance on the production method of the variety and on whether the variety was an F₁ hybrid or a population, how the parents were maintained, whether heterogeneity existed between plants or inside the plants, whether it was not possible to make the parents more uniform and so on. The Working Party had therefore been asked to clarify these questions and report back to the Committee at its next session.

53. The expert from Germany reported on the rejection of a seed propagated *Pelargonium* variety because of lack of uniformity. She asked the group which method from the General Introduction should be used. Those methods of hybrids or those of cross-fertilized crops as the variety was not a hybrid resulting from two inbred lines but from two populations with some inbreeding. The exact way in which inbreeding took place was, however, not known to the experts. The Working Party noted the decision of the Technical Committee, as a result of a similar case presented from the Technical Working Party for Vegetables (TWV), that the competent authority had to prove that the variety was really a hybrid. For that purpose the parent lines might be necessary. If the applicant was not willing to submit the parent lines, the variety had to be treated as a normal cross-fertilized variety.

54. The expert from France reported of similar cases for *Tagetes* and *Impatiens* in France. In seed propagated varieties the parents in the hybrid were not so uniform. The question was whether a different approach than that for pure inbred lines was acceptable which was more adaptable to the way of propagation. At present it was rather difficult to test the parent lines in a similar way as for example in maize. It was important that experts exchanged more information on this subject.

55. In order to give the Technical Committee more information in addition to TC/34/8, the Chairman will prepare a document in cooperation with the expert from Germany before the end of January 1999 clarifying the background and proposing possible procedures for the testing.

Special Cases in New Species

56. The Working Party noted that the Technical Committee had taken note of the problems of finding varieties of common knowledge and of judging whether clonal material might no longer be new and of how much selection was necessary to enable plant material selected in the wild to be protected. While according to the 1978 Act of the UPOV Convention a variety could be protected even if it was a discovery, the 1991 Act, in the definition of the breeder, required that the variety be not only discovered but also developed. Several experts in the Technical Committee had agreed that this question also included politically sensitive subjects. The Committee therefore had to carefully study the technical and legal problems involved. All experts agreed that it was not possible to seek protection for material merely obtained from a gene bank unless a certain amount of selection work had been done. The intensity of this selection work would have to be judged differently depending on the species concerned.

57. The Working Party also discussed the case of material selected in the wild and then vegetatively propagated. The variety was in most cases identical to the material collected. Should that be considered sufficient to grant variety protection? The experts considered two aspects: Was there sufficient selection work done and was the variety still new? Some experts took the position that there was no difference between the breeder making the selection directly in the wild and collecting several plants or doing the selection on his premises. With respect to the novelty it depended on the total variation in the species. If it could be assumed that the plant material selected was expected to have occurred only in that place and nowhere else it may still be considered new. If it could be expected to have occurred in several places, it may have been available to others and already been selected and

marketed and was therefore no longer new. Material for vegetative propagation selected in a market would in all cases be no longer new even if sold under the species name only.

58. The Working Party could not reach any conclusion. It agreed that that question was at present a very sensitive one. In the session there was also no fully supported opinion on what was considered to be sufficient breeding. Some experts also considered that a description of a species and its variation would be sufficient knowledge to block all varieties of the described range and a difference for a new variety had to be seen in a not yet described range before protection could be granted.

Harmonization of Test Guidelines and Revision of the General Introduction to Test Guidelines

59. The Working Party noted that the Technical Committee had approved a report on the results of a meeting of the Editorial Committee, the Chairmen of the various Technical Working Parties and the Chairman and Vice-Chairman of the Committee, in which a general discussion on the revision of the General Introduction to Test Guidelines and on the harmonization of the states of expression and the Notes in the Test Guidelines had taken place. The Editorial Committee and the Chairmen considered that the main purpose of the General Introduction was to lay down the basic principles according to which the Test Guidelines were established and should be applied and which should themselves be applied together with the individual Test Guidelines. In addition, the document should provide new experts with information on the basic principles for the testing of varieties. The document should not be too long: its size should be about what it was at present. Its presentation should be improved, however, and the Editorial Committee could imagine it being presented in a form similar to the booklet containing the UPOV Convention. The Editorial Committee considered that the General Introduction should not be changed too often, and therefore should really contain only basic principles and not details, which might change more frequently. There should be a reference simply to another document which would contain a collection of detailed rules, such as the methods of COYD and COYU analysis or the document on the testing of uniformity in vegetatively propagated and self-propagated varieties (documents TC/33/7 and TC/34/5), as well as lists of definitions of certain statistical terms (e.g. population standard) to facilitate understanding by crop experts and of certain botanical terms (e.g. epiphyte) to facilitate understanding by TWC experts when they were approached for statistical help.

60. The Editorial Committee then went through document TG/1/2 and discussed and decided where changes in the present text were needed and who would have to draft the new wording. It entrusted parts for revision to the various Technical Working Parties or to individual experts, for instance the harmonization of states of expression to the expert from South Africa, the part on reference collections to the expert from France and the statistical parts to the TWC. It proposed to split paragraph 28 and prepare separate paragraphs for vegetatively propagated varieties and for truly self-pollinated varieties. It also proposed to change Part C of the document according to the new layout of the Test Guidelines and to copy certain rules from document TWF/28/9 separately into each of the individual sections of the Test Guidelines. It considered removing the information on the order of characteristics and including it in a separate document as apparently it was not all that basic and in practice was not applied very strictly. After paragraph 49 on characteristics, a new paragraph would be

included to take care of the special Annex to a certain Test Guidelines document that included electrophoretic characteristics as a third category. The part on the Technical Questionnaire would have to be adapted to the new layout and the whole document would have to be adjusted to the 1991 Act of the UPOV Convention. The members of the Editorial Committee and the Chairmen agreed to prepare comments and proposals in response to those comments, and also proposals already received as well as further comments, with the drafting of certain parts. The results would then be submitted to the various Technical Working Parties at their sessions, with a request for their comments which in turn would be submitted to the Technical Committee at its next session. The Committee asked the experts to submit any comments on documents TWF/28/7 and TWF/28/9 to the Office of UPOV.

Revision of the General Introduction

61. The Working Party went through the General Introduction paragraph by paragraph and made the following suggestions:

Paragraphs

- 1, 5 To speak of genera and species, and in paragraph 2 of several species.
- 10 To have the second sentence replaced by the following wording making it clear that the qualitative expression of quantitative characteristics was frequently made just for practical purposes: “Many characteristics which do not fit this definition may be handled as qualitative, when it is more reasonable to disregard the continuous variation for practical purposes and the states created are sufficiently different from one another.”
- 13 To limit the paragraph by adding “as far as possible and justified (or considered useful).”
- 18 To contain more information and an explanation of how to define “common knowledge.” For that purpose all experts will send to the expert from the United Kingdom comments and proposed definitions on what they consider to be common knowledge for the preparation of a document by the end of January 1999. The Working Party was aware that legal aspects were involved and not too precise information could be given. It also referred to its discussion on the subject on new species. A similar question arises when having to check denominations or select reference varieties.
- 21, 22 The Working Party noted the proposal from the Technical Working Party on Automation and Computer Programs (TWC).
- 34 To be enlarged for the case of hybrids not resulting from pure inbred lines but from still heterogeneous parent lines.
- 38 To reflect the new situation of more and more States offering the possibility of protection for varieties of the whole plant kingdom and to cover cases where not only other States but also the applicant or botanical gardens, gene banks or specific institutes or regional groupings would maintain part of or the whole reference collection. One

might also wish to cover more than seed or plant material (e.g. DNA). In that connection the Working Party agreed that the reference collection would require living material which would enable a comparison to be made on plant material. Material of a herbarium or a pure description or test report, however detailed it might be, was not sufficient. If no more living material of an old variety existed to produce the variety, that variety would no longer be able to form part of the reference collection or common knowledge. Sometimes for mutants of old varieties, applications would be made and would have to be granted protection if no living material of the former variety could be obtained.

- 48 To reflect the new understanding of the role of example varieties.
- 49 To make it clear that a longer list of agreed characteristics from which each expert could choose those suited to him was preferable to a short list to which every expert would add characteristics, sometimes in parallel with another State, but with different states of expression.
To include also a paragraph on the status of the Test Guidelines (Article 1(vi), Articles 5, 7, 8, 9 of the Convention) and on the Cooperation in Testing with other countries, institutes or the applicant.
- 51 To have paragraph 51 amended according to the new Technical Questionnaire and to have the new paragraph 6 reworded to make it better understood by the applicant. The new wording should include, after the heading, a line giving an example and should read as follows:

“6. Similar varieties and differences from these varieties

Denomination(s) of variety(ies) <u>similar</u> to your variety	Characteristic(s) in which your variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the <u>similar</u> variety(ies)	Describe the expression of the characteristic(s) for your variety
Example: name of variety	Plant: height	short	tall

The Working Party considered that wording more easily understood as, apart from the experts involved in the drafting and familiar with the UPOV terminology, few would understand the term “state of expression.” The Working Party also proposed to delete the footnote as it would not be at all understood by the applicant and would apply only in very rare cases. Even in those cases the applicant would not know the exact states of expression of the Test Guidelines as he would not always have a copy of those Test Guidelines at hand and he would not really give the same expression in both columns.

“Release of Varieties: The Working Party noted the proposal of the Technical Working Party for Vegetables (TWW) to separate the question of release of varieties (GMO) from the chapter of origin and to place it in a separate new Chapter 5 after Chapter 4. It also noted that the Technical Working Party for Fruit Crops (TWF) could agree on changing the title of the Chapter 4 to include the release and keep it in Chapter 4, but could also imagine separating it from Chapter 4 and placing it in a new chapter, either immediately after Chapter 4 or, to avoid renumbering of the remaining chapters, after Chapter 7. The Working Party finally agreed to propose to keep the release in Chapter 4 as it contained some part of origin, but change the title in adding the release.”

Harmonization of Test Guidelines

62. The Working Party referred to documents TWF/28/7 and TWF/28/9 on the standardization and harmonization of states of expression in Test Guidelines and on so far unwritten rules discussed during the last session. It also noted document TWF/29/7 introduced by the expert from South Africa and giving answers to questions raised or comments made to document TWF/28/7. The three documents gave rise to detailed discussions on some specific aspects partly already discussed during the present session under the subject of status of Test Guidelines. It appeared that the most important aspect was to arrive at an agreed definition of what was a true qualitative characteristic and what was a true quantitative characteristic and that the Test Guidelines should not be used directly for establishing distinctness.

63. When going through the individual Test Guidelines, the expert from South Africa drew the attention of the experts to certain examples which were highlighted to explain certain features. On the basis of document TWF/28/7 the expert from South Africa will prepare a new, much shorter document of the main different situations with only a few examples to reduce the size of the document to ensure it is studied by all experts.

64. Document TWF/28/9 will be enlarged and grouped according to the different chapters in the Test Guidelines.

Presentation of Characteristics

65. The Working Party noted that in the past the states of expression had been presented in quantitative characteristics in a symmetrical way. In the last one or two years that practice had apparently been changed without warning. The Working Party regretted that change and wished to return to the former practice that if state 1 was given also state 9 should be given even if no example varieties could be given for that state and *vice-versa*.

66. In connection with the discussions on several Test Guidelines, the Working Party finally proposed the following rules to the Technical Committee:

(a) In shape characteristics with round, elliptic and ovate or obovate states, the state “round” should separate the symmetrical shapes like “elliptic” from the non-symmetrical shapes like “ovate”, e.g. elliptic (1), circular (2), ovate (3), obovate (4).

(b) The tip of an organ is the most extreme part, the top is the highest part compared to soil level.

(c) In quantitative characteristics, the Notes should be given in a symmetric way in case of a fixed medium state. If the Note 1 is given, Note 9 also should be given in a symmetric way in the case of a fixed medium state. If the Note 1 is given, Note 9 should be given even if there is no example variety mentioned. The request for the same word to be used for the same Note for “attitude” should be limited to a few exceptions, as also proposed by the Technical Working Party for Fruit Crops (TWF).

(d) The wording of the characteristics should be made more precise and self-understood without knowledge of the states and the states should also be made more readily understood without the full text of the characteristic, irrespective of sounding a little strange from a purely linguistic point of view or would not be one hundred percent grammatically correct, as long as the experts consider it helpful for the understanding of the characteristic. Therefore, the word “presence of” or “intensity of” could be added, even if the first state read “absent” (if it was felt necessary to avoid confusion) or “absent or very weak” as long as without the addition it was not clear whether only the absence was of importance or other criteria such as number, size, length, width, density, color, etc.

(e) In shape characteristics in one state of expression, there can exist two different expressions (e.g. Weeping Fig, characteristic 19: narrow elliptic (1), elliptic (2), broad elliptic or broad ovate (3), ovate (4)), but also cases when there could exist the whole range between two states of expression (e.g. Statice, characteristic 5: elliptic (1), broad ovate to deltoid (2), narrow obovate (3), obovate (4)). The use of the word “to” was therefore also acceptable in shape characteristics.

(f) The characteristics in the Table of Characteristics should follow the botanical order as follows: plant, stem, leaf, petiole, flower, parts of the flower, fruit, seed,

physiological characteristics as time of flowering, etc. That order should, however, be applied with some flexibility. If considered useful by the experts, the characteristic of a part of a higher organ concerning that organ was considered to be more usefully connected with other characteristics of the lower organ, that should be acceptable. Therefore, the characteristic: "Flower; number of petals" should be placed, if so desired, next to other characteristics of the petal and not necessarily next to other flower characteristics.

(g) In the species so far dealt with by the Working Party, decisions on distinctness and uniformity are taken on the basis of visual observations. Measurements, if at all taken, are only a further tool and are only used to support the visual observation of the expert. Therefore the application of simple statistical methods as t-test or LSD is sufficient.

(h) To renumber characteristics in new documents for Test Guidelines each time but to place in brackets the number of the first draft for new Test Guidelines or in case of revisions, the number in the last adopted document.

(i) To allow in a limited number of cases exceptions from the general rule if the experts consider them justified and if they are listed for future similar cases, e.g. Gerbera, characteristic 7: "shape of apex" with the states "narrow acute (1), acute (3), right angle (5), obtuse (7), rounded (9)." The normal rule to add a qualification to the state "acute" as "medium" or "moderate" as some experts may consider "acute" to cover also state 1 (narrow acute) may lead to the fact that many varieties would be given the state 2 (narrow acute to moderately acute) instead of at present state 3 and the difference between "moderately acute" and "right angle" would be "very narrow," while the word "acute" alone was considered by the experts to be about in the middle between "very acute" and "right angle." In other cases, however, the word "moderately" should be accepted if considered more adapted to the common use in the species concerned.

(j) The use of the word "very" for the states 1 and 9 of a quantitative characteristic should not be imposed in all cases. For example in the case of curvature it should be possible to use the following states: "strongly curved, moderately curved, straight, moderately reflexed, strongly reflexed." Depending on the species concerned and the wish of the crop experts, the states could be given the Notes "1, 2, 3, 4, 5" or "1, 3, 5, 7, 9." At present the Working Party favored the qualitative expression. The same should also apply to the states "much smaller, moderately smaller, same size, moderately larger, much larger; very acute, moderately acute, right angle, moderately obtuse, very obtuse; much lighter, moderately lighter, similar, moderately darker, much darker; far below, moderately below, same level, moderately above, far above."

(k) In all these cases in the quantitative presentation, the word "to" should be used for the even states. In the same way as in other quantitative characteristics like "length" the word "to" would not be considered to indicate a range (e.g. from very acute to moderately acute), but the intermediate position between the two words mentioned as would "short to medium" indicate the intermediate position between "short and medium" and not the whole range between short and medium.

67. The Working Party discussed at length the meaning of the example varieties in the Test Guidelines which often were difficult to select. It noted that the examples mainly reflected the expression of the given state of expression in the State of the drafter of the Test Guidelines. It

also noted that it was not possible to mix inside a given characteristic example varieties from different countries before having grown them at one single place and thus ensured that the same conditions would lead to the same expression. Many experts had difficulties in the beginning to accept that rule. They considered it not dangerous to add such example varieties from different testing places, especially in qualitative characteristics. Some experts considered having in an annex several sets of example varieties for different regions but finally accepted that principle. They noted that there was no harm in accepting additional characteristics with a set of example varieties from a different country as long as all examples for that characteristic came from that country. The rule was not to mix example varieties inside one characteristic without testing them at a single place.

68. At the request of the Office of the Union, the Working Party discussed the presentation of example varieties in the Test Guidelines which in most cases had the denomination preceded by a “GREX.” It was explained that in *Cymbidium* it was common practice to not only give the variety denomination but also the “GREX.” The GREX was the name given to all offspring of a crossing of two given parents. Whenever these two parents were crossed, the offspring would receive the same name. Only the selected plant resulting in a variety would then be given a denomination which would be added to the GREX in simple inverted commas. That practice was not followed in Japan and therefore the new example varieties from Japan did not include a GREX. The experts from Japan were asked to search for the corresponding GREX or otherwise the example variety would be deleted as the presentation had to be consistent inside the document.

69. The Working Party noted the report from the TWF on the discussions to improve harmonization in the wording and drawings for shapes. In a similar way as was done in document TWF/29/3, the TWF will collect from each member State examples of the publications preferred in that country by the fruit crop expert for the wording of shapes. On the basis of the collection received, the TWF planned to select one of the most frequently used publications and recommend it for further use by all experts in the TWF. The Working Party considered that to be a useful exercise and asked to be included in the collection of information and in the selection of the publication to be used in future inside UPOV.

Final Discussions on Draft Test Guidelines

Test Guidelines for *Cymbidium*

70. The Working Party noted documents TG/164/1(proj.), TWO/31/5 and TWO/31/10, and made the following main changes in document TG/164/1(proj.):

(i) Material Required: To recommend the following minimum quantity of plant material: “15 plants, 2 to 3 years old, with at least two bulbs,” and as a consequence to have the figure “20” in paragraphs (iii) (3), (iv) (1) and (iv) (2) to be lowered to “10.”

(ii) Methods and Observations: To have paragraphs (4) and (9) combined to read: “All observations on the inflorescence and the flower should be made on the most recently fully opened flower on the inflorescence before fading of color, at the time when 50% of the flowers on the inflorescence have opened”; to have in paragraph 8 “outer” replaced by “dorsal.”

(iii) Table of CharacteristicsCharacteristics

- 3 To be deleted and to have two new characteristics included after characteristic 2, both with an asterisk and drawings for explanation, reading:

“(i) Plant: angle of longitudinal axis with line from base of highest point of curvature” with the states “very small (about 5°), small (about 25°), medium (about 45°), large (about 65°), very large (about 85°)”

“(ii) Plant: angle of longitudinal axis with line from base to tip of longest leaf” with the states “very small (about 15°), small (about 55°), medium (about 95°), large (about 135°), very large (about 175°)”

- 4 To have the additional state “very small (C. Goeringii)”

28, 29 To have the words “in full face” deleted

34, 41, 59 To have “shape in longitudinal section” replaced by “curvature of longitudinal axis”

48, 65, 83, 94 To have “color change” replaced by “border between color zones”

76 To have states 3 and 4 replaced by “trapezium (3), circular (4)”

98 To have the asterisk deleted.

(iv) Technical Questionnaire: To have in all Technical Questionnaires under 7.3 the word “included” replaced by “added” and to have Chapter 4 amended as agreed for Weeping Fig.

Test Guidelines for Weeping Fig

71. The Working Party noted documents TG/171/1(proj.), TWO/31/6 and TWO/31/10, and made the following main changes in document TG/171/1(proj.):

(i) Table of Characteristics

To have the example varieties mentioned in document TWO/31/10 included in the Table of Characteristics

- 1 To have the Notes: “1, 2, 3, 4”

- 2 To read: “Plant: inner angle of lateral shoots to main stem” and to have “nearly” deleted in state “3”

- 19 To have “and” in state “3” replaced by “or”
- 22, 23 To have “self-colored” replaced by “single-colored” and the bracketed contents deleted
- 26, 27, 31 To have “main color” replaced by “ground color”
- 33 To have “degree of” added
- 36 To read: “Leaf blade: conspicuousness of crystal cells” with the states “absent or very weakly conspicuous (1), weakly conspicuous (2), strongly conspicuous (3)”
- 41 To be deleted.

(ii) Technical Questionnaire: To have the heading enlarged to read: “Information on origin, release, maintenance and reproduction of the variety” and to have the heading “Breeding Method” of paragraph 41. Replaced by “Release” and placed after 4.2; to have a fourth item in 4.2 reading “(d) Other (specify)”; to have the order in 4.3 reversed; to have after 4.3 the word “included” replaced by “added.”

Test Guidelines for Statice

72. The Working Party noted documents TG/168/1(proj.), TWO/31/6 and TWO/31/17, and made the following main changes in document TG/168/1(proj.):

(i) Subject of these Guidelines: To have the wording with the different species copied from the proposal presented in document TWO/31/6 and presented in the form of a list which was more easily readable.

(ii) Table of Characteristics

- 1 To have “*L. dumosum*” replaced in this and all following characteristics where it appears by “*Goniolimon tartaricum*” and to have the example varieties from document TWO/31/17 incorporated in the Table of Characteristics with the exception of those for characteristic 1 which still have to be rechecked
- 2 To have “peduncles” replaced by “inflorescences”
- 3 To have “*L. sinensis*” in this and all other characteristics where it occurs replaced by “*L. tetragonum*”
- 5 To have “triangular” replaced by “deltoid”
- 6 To have the spelling of “*L. bonduellei*” corrected in this characteristic and in characteristics 9 and 13
- 16 To have “intensity of” included
- 24 To have “of peduncle” deleted and for state 9 the species corrected to “*P. suworowii*”

26 To have the Notes “1, 3, 5”

30 To read: “Calyx: type”

35 To have the word “type” added to all states.

(iii) Technical Questionnaire: To have the spelling of the authors of the Latin names corrected; to have Chapter 4 amended as for Weeping Fig.

New Methods, Techniques and Equipment in the Examination of Varieties (Report on the Fifth Session of the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT))

73. The Working Party noted document C/32/10 Add. specifying that the Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular (BMT) had held its fifth session in Beltsville, United States of America, from September 28 to 30, 1998. At that session, discussions had taken place on the following subjects: (a) Short presentation of research results or their follow-up on different species; (b) Assessment of variability within varieties; (c) Assessment of variability between varieties; (d) Statistical methods: Confidence intervals and accuracy of distance estimates; Alternative to dendrograms; Refinement of the analysis of molecular variance (AMOVA) for distinctness studies and as a tool to assess uniformity; Combination of information from diverse data types (AFLP, SSR, morphological data, etc.); (e) Position of the breeders on DNA profiling; (f) Use of DNA profiling methods by expert witnesses in disputes concerning essential derivation; (g) The use of DNA profiling for prescreening as a possible tool in DUS testing; (h) Possibilities and consequences of the introduction of DNA profiling methods for DUS testing; (i) Definition of the variety. The next session of the BMT is scheduled for February or March 2000, two to three weeks before the session of the Technical Committee.

74. The Working Party noted document BMT/5/6 studying the application of DNA profiling methods to find the variation between and inside rose varieties. It agreed to the request of the BMT that rose might be the most suitable ornamental species for studies of DNA profiling. As a second species it mentioned chrysanthemum. Most of the experts stressed, however, that they saw no need at all for such studies. In the ornamental species sufficient characteristics were available for the testing of DUS. The Working Party confirmed its position that such methods should only be accepted if there was a strong correlation between existing morphological characteristics and any of the bands observed. In the ornamental species these methods were not needed and were not wanted. The Working Party expressed its serious concern that it did not want to face in future a situation in which it was put under pressure to use such methods just because governments had spent a lot of money on research which the Working Party considered superfluous. It did not want the methods developed by the laboratories in the end to be imposed on them, as had happened in the past in similar cases for some crops using other methods like electrophoresis. In ornamental species, differences in varieties should be possible to be observed visually, in order to verify if the varieties were not too close to each other to justify a separate variety.

Central Computerized Database

75. The Working Party noted updated information supplied by the Office of UPOV on the UPOV-ROM Plant Variety Database. In 1997, six issues of UPOV-ROM had been issued at two-monthly intervals. In 1998, the first five UPOV-ROMs had already been distributed. The software used by the French firm was the same as that developed for the WIPO ROMARIN CD-ROM. As new improvements in the latter's software had been made, the UPOV-ROM would also contain several improvements in the near future, the main one being the possibility of using it in networks. The UPOV-ROM already contained the 1997 OECD List of Cultivars eligible for certification and, although at present available only in pdf format, the list of varieties protected through the European Union Community Plant Variety Office (CPVO). Discussions were also under way to include the varieties contained in the European Union Catalogue. The UPOV-ROM had also been offered to subscribers since the beginning of the year at an annual subscription price of CHF 750 plus postage.

76. The Working Party also noted that the Technical Working Party on Automation and Computer Programs (TWC) had requested that, in future, States should show for each record whether it was a new record (1), a modified record (2) or an unchanged record (3).

77. The Working Party discussed possibilities on how the UPOV-ROM could be improved and what information could be added. From the purely technical point of view it would be ideal if the UPOV-ROM would also contain as complete information as possible on the characteristics of the varieties, meaning the full test report. In several countries that would, however, create legal problems and might also undermine the payment for the purchase of test reports. A second possibility would be to include the full variety description. The description would not contain any secret or confidential element and would not pose any legal problems. Some States, however, delivered variety descriptions only against payment of a certain fee. Some States also required proof of a certain interest. The next level below that would be the description with the characteristics contained in the Technical Questionnaire or, at a still lower level, with the characteristics used for grouping varieties. During the testing and before the offices would have their own results, the information provided by the applicant could be included with the reservation that it was information submitted by the applicant and not yet verified by the office. Here some experts foresaw difficulties in including information not verified by the office, while others envisaged legal difficulties as the information from the applicant had to be kept confidential. All experts agreed, however, that it would be useful to have some information already before the granting of rights to be able to know whether plant variety protection had been applied for a given variety in another State; from the breeder's reference or the variety denomination alone that was not possible. The inclusion of a picture was also considered helpful although the problems were not underestimated.

78. In order to get a clearer picture, the Office of UPOV would distribute a circular to all Working Parties inquiring about their wishes and need for inclusion of technical information in the UPOV-ROM and the practical feasibilities and possible legal problems, workload and costs with respect to the inclusion of the full test report, full description, Technical Questionnaire characteristics, grouping characteristics or even less information such as only groups of varieties (e.g. winter, spring varieties, climbing, bush types, annual, perennial, fruit, ornamental, rootstock, etc.).

79. The Working Party also noted that the use of the UPOV-ROM for the checking of variety denominations was considered very useful by the majority of experts. One expert, however, demanded more frequent updating by member States as for some States there was still a need to consult the national gazettes which contained more recent information. States should supply the information to UPOV at the same time as they published it in their gazettes. The updating should be done in parallel to ensure that the UPOV-ROM contained updated information. There were several technical problems to be solved which would best be discussed and solutions to overcome them found if a few experts responsible for the actual checking of denominations would meet and try to find solutions. The Office of UPOV in Geneva could be a possible meeting place.

Discussion on Working Papers on Test Guidelines

Test Guidelines for *Chrysanthemum* (Revision)

80. The Working Party noted documents TG/26/4 and TWO/30/8 and the report of the expert from the United Kingdom on the results of the meeting of a subgroup which met in the evenings in order to incorporate in a new draft the results of changes made during the last session and further comments and example varieties. The expert from the United Kingdom will prepare a new draft with all results by the end of January 1999 for circulation to the Working Party for final comments.

Test Guidelines for Geraldton Waxflower

81. The Working Party noted documents TWO/30/9 and TWO/31/13, and noted that a subgroup for Geraldton Waxflower had met during the evenings and in the morning of November 19 in parallel with other subgroups. A number of amendments to the current working document were proposed. Several characteristics in the table required clarification and might need to be redefined. It was also possible that several new characteristics might be added to reflect progress in the breeding of new interspecific varieties. It was proposed that the amendments be discussed by correspondence with the experts in Australia and Israel. A new working document will be prepared for the Working Group in 1999.

Test Guidelines for Iris

82. The Working Party noted document TWO/29/3 and made the following main changes in that document:

(i) Subject of these Guidelines: This and the following chapter to follow the new layout; the second sentence of paragraph 2 of Chapter IV to be deleted and the wording of paragraph 2 of Chapter V to follow the wording in the Table of Characteristics.

(ii) Table of Characteristics

Characteristics

- 2 To be placed before characteristic 1
- 3 To have the addition “profile in”
- 5 To read: “Peduncle: thickness”
- 14 To have the addition “on upper side”
- 17 To have the addition “shape of” with the third state “flame like” and drawings for explanation
- 24, 25 To have the words “of blade” deleted
- 26 To be placed before characteristic 9
- 27 To have “near” deleted
- 28 To have the first state read: “whitish”
- 30, 31 To start with “Pistil: ...”
- 32 to 35 To start with “Crest: ...”
- 37 To be deleted

The expert from the Netherlands to supply more example varieties and a drawing explaining the different organs.

(iii) Literature: To have literature proposed by the expert from Germany added.

(iv) Technical Questionnaire: To follow the new lay-out and the decision on the position of release and origin other than seedling, mutation or discovery as specified under Weeping Fig in paragraph 67 (ii).

Test Guidelines for Kangaroo Paw

83. The Working Party noted documents TWO/30/10 and TWO/31/12, and made the following main changes in document TWO/31/12:

(i) Material Required: To have the last sentence of paragraph 1 deleted.

(ii) Methods and Observations: To have the order of paragraphs 1 and 2 reversed and the figure in paragraph 2 replaced by “10”; to have paragraphs 4 to 7 combined in one paragraph.

(iii) Grouping of Varieties: To have in paragraph 2 the characteristics 19 and 21 replaced by the flower color groups from page 24 after having changed its heading to “Flower Color Group.”

(iv) Table of Characteristics

Characteristics

1 To have the words “top of” replaced by “including” and to have in this and all other characteristics the inverted comma removed from the example varieties and some of those example varieties replaced by newer varieties

3 to 6 To be placed after characteristic 13

6 To have the word “total” deleted

8 To have “wide” replaced by “broad”

9 To have the states “erect, semi-erect, spreading”

10 To have “degree of” added

13 To read: “Leaf: degree of hairiness of margin” with the states “absent or very weakly expressed, weakly expressed, strongly expressed”

14, 15, 16, 17, 19 To start “Perianth tube: ...”

17, 18 To start “Perianth lobe(s): ...”

18 To receive a plus to refer to the drawings and to have the additional state “very strong (9)” and to receive an additional drawing for state 5

20 To read: “Perianth tube: number of colors of hair”

23 To start: “Ovary: ...”

24 To start: “Pedicel: ...”

To have the order of characteristics after characteristic 13 as follows: “3, 4, 5, 6, 24, 15, 16, 19, 20, 21, 22, 17, 18, 25, 23, 26, 27.”

(v) Technical Questionnaire: To have Chapter 4 amended in line with the amendments for Weeping Fig, to have “meristem” replaced by “*in vitro*,” to have in Chapter 5 characteristic 5.3(9) deleted and in Chapter 7.3 the request for a picture added.

Test Guidelines for Lavender and Lavendine

84. The Working Party noted document TWO/29/14 and the results of a subgroup which met in the evenings and in parallel in the morning of November 19, 1998, as reproduced in Annex III to this report. A new draft will be prepared by the experts from France for discussion during its next session.

Bulk Samples

85. In connection with the report on the discussions in the Subgroup on Lavender, the Working Party discussed the problem of bulk samples for the testing of characteristics in the content of certain oils or fragrances. In many cases, as for example for lavender, the examination was done in special institutes at rather high cost and thus only one single test on the basis of a bulk sample was made. How was it possible to assess uniformity on the basis of a single sample? Several experts reported that in most cases distinctness was not only seen in those characteristics but also in others. Should distinctness depend only on a difference in such a characteristic, of course, several samples would be necessary to ensure that both varieties were uniform in that characteristic.

Test Guidelines for Ornamental Apple (Revision)

86. The Working Party noted documents TG/14/5 and TWO/31/18 and the results of a Subgroup which met in the evenings and in parallel with other subgroups in the morning of November 19, 1998. As a result of those meetings a new draft will be presented to the Working Party for discussions during its next session.

Test Guidelines for Rubber

87. The Working Party noted document TWO/30/3, but at the same time noted that the interest raised by some States had diminished in the past. It therefore decided to keep the document pending and not pursue discussions unless new events raised interest again.

Test Guidelines for *Zantedeschia* (Calla Lily)

88. The Working Party noted documents TWO/30/2, TWO/31/3 and TWO/31/11, and noted that a subgroup had met in the evenings and on November 19, 1998 in parallel with other subgroups. The subgroup decided on the following amendments to document TWO/31/3:

(i) Material Required: To have the material required changed into: "20 tubers/rhizomes in paragraph 1; to delete the sentence *in vitro* propagation in paragraph 2.

(ii) Conduct of Tests: To add to planting time "March (Northern hemisphere), before August to October" in paragraph 3.

(iii) Characteristics and Symbols: To delete paragraph 3.

(iv) Table of Characteristics

Characteristics

To replace the example varieties in characteristics 1, 7, 13, 29 with others. To add asterisks to characteristics 4, 5, 6, 10, 16, 18

18 To add the state “brown red” after “dark green”

28, 29, 30 To replace “differently colored” with “dark”

22, 23 To be deleted and to consider whether characteristic 21(e) should be deleted

To further discuss the following matters:

(ii) Material Required, paragraph 1, and (iii) Conduct of Tests, paragraph 3: Planting distance plus the last paragraph under that heading.

Certain aspects of (vii) Table of Characteristics: Characteristic 3, 3(a), 3(c), 5, 8, 9, 13, 15, 16, 17, 18, 21, 21(a), 21(b), 21(c), 21(d), 21(f), 24, 25, 26, 27, 27(a), 30, 31, 32, 36, 39, 40, 41, 42.

(x) Technical Questionnaire: 7.3: A new draft will be prepared by the expert from South Africa for discussion during the next session.

Test Guidelines for *Osteospermum*

89. The Working Party noted documents TWO/30/5 and TWO/31/2 and made the following main changes in document TWO/31/2:

(i) Methods and Observations: To have paragraph 2 and the second sentence of paragraph 3 deleted.

(ii) Technical Questionnaire: To have Chapter 4 amended as for Weeping Fig.

(iii) Table of Characteristics

Characteristics

1 To have the last two states read: “semi-drooping (7), drooping (9)”

3 To have the last Note corrected into “7”

5 To have “degree of” added

8 To have the characteristic split into two as follows:

“(i) Inflorescence: number of complete ray flower whirls” with the states “one (Sparkler), two (Zulu), three (Durban)” and

“(ii) Inflorescence: presence of incomplete ray flower whirls” with the states “absent, present”

16 To have the word “main” added before “color” and to have two new states added after state 4 reading: “brown (Beira) (5), brown-purple (Sunny Olympia) (6)”

17 To have an additional state added after state 2 reading: “purple (Pluto) (3)” and another after state 6 reading: “black (8)” and to have the spelling of the example variety “Swazi” corrected.

Test Guidelines for Gerbera (Revision)

90. The Working Party noted documents TG/77/6 and TWO/31/14 and made the following main changes in document TWO/31/14:

(i) Subject of these Guidelines: To have this and the following chapters aligned to the new presentation:

(ii) Table of Characteristics

Characteristics

7 To have the word “moderately” added before “acute”

10, 11 To have the words “presence of” added

12 To have the word “partly” replaced by “semi” and consequently also in characteristics 14, 15, 42, 43, 45 and to have the order of the drawings corrected

18 To read: “Flower head: position of distal part of bracts in relation to outer ray florets” with the states “apart (1), touching (2)” or to reuse the wording of characteristic 22 of the present adopted Test Guidelines

23, 24 To have the word “moderately” added before the states for Notes 3 and Note 7

25 To have “shape” replaced by “profile”

32 To read: “Outer ray floret: number of colors”

33 To read: “Single-colored varieties only: Outer ray floret: shading of color”

35 To have the addition: “presence of”

36 To have “at base half” replaced by “on basal half”

37 To have “upper” replaced by “distal”

44, 45 To read after the first column: “Disc florets of outer row: main color of perianth lobes”

50, 52 To have the second state read “same.”

Test Guidelines for Petunia

91. A subgroup met in the evenings and in the morning of November 19, 1998, in parallel with other subgroups and in the afternoon of November 20, 1998, to discuss a preliminary draft prepared by experts from Israel. The results were reported upon partly in the session. A new draft will be prepared by the expert from Israel for discussion during the next session.

Status of Test Guidelines

92. The Working Party agreed that the draft Test Guidelines for *Cymbidium*, *Limonium* and Weeping Fig should be sent to the Technical Committee for final adoption. It agreed that the draft Test Guidelines for Iris, Kangaroo Paw, *Osteospermum* and Gerbera should be sent to the professional organizations for comments.

93. As lack of time did not allow the Working Party to also discuss the Working Papers on Test Guidelines for *Eucalyptus gunnii*, *Eustoma*, *Guzmania*, *Hippeastrum*, *Impatiens*, *Nerium*, Pentas and Thyme, all experts were asked to send their comments to the leading expert. Depending on the comments received, the leading expert would prepare a collection of comments or a new document incorporating those comments before July 15, 1999. Document TWO/31/8 on Thyme should also be sent to the Technical Working Party for Vegetables for comments.

Future Program, Date and Place of Next Session

94. On the basis of written information, the Working Party agreed to hold its thirty-second session in Pruhonice near Prague, Czech Republic, from September 13 to 18, 1999. It was planned that the morning of the first day be exclusively reserved for discussions on image analysis with a report on the outcome of the rose ring test to be prepared in the first months of 1999. Thereafter it was planned that the following items would be discussed during the forthcoming session:

- (a) Short reports on special developments in plant variety protection in ornamental plants and forest trees;
- (b) Important decisions taken during the last sessions of the Technical Working Party and the Technical Committee;

- (c) Testing of seed propagated varieties of ornamental species (the experts from Germany and the Netherlands to prepare a document for the Technical Committee);
- (d) Special cases in new species;
- (e) Revision of the General Introduction, Harmonization of Test Guidelines, Use of Shapes in Test Guidelines;
- (f) Final discussions on draft Test Guidelines for
 - Gerbera (Revision) (TG/77/7(proj.))
 - Iris
 - Kangaroo Paw
 - *Osteospermum*
- (g) Discussion on Working Papers on Test Guidelines:
 - *Calluna* (Germany to prepare a new document)
 - Chrysanthemum (Revision) (TG/26/4, TWO/30/8; the United Kingdom to prepare a new draft)
 - *Cupressus* (France to prepare a draft in cooperation with New Zealand by the end of March 1999)
 - *Dendrobium* (Japan to prepare a new document by the end of March 1999)
 - *Eucalyptus gunnii* (TWO/31/7; France to collect remarks)
 - *Eustoma* (TWO/31/4; Japan to collect remarks)
 - Geraldton Waxflower (TWO/31/13; Australia to prepare a new document)
 - *Guzmania* (TWO/29/9, TWO/31/16; CPVO to collect remarks)
 - *Hippeastrum* (TWO/30/6; the Netherlands to collect remarks)
 - Impatiens (France to collect remarks)
 - Lavender and Lavendine (TWO/29/14; France to prepare a new draft)
 - *Leptospermum* (Australia to prepare a new document by March 1999)
 - *Nerium* (TWO/31/15; France to collect remarks)

- Ornamental Apple (Revision) (TG/14/5, TWO/31/18; the United Kingdom to prepare a new paper)
- Pentas (TWO/29/10; the Netherlands to collect remarks)
- Petunia (Israel to prepare a new draft)
- Poinsettia (Revision, TG/24/5; Denmark to prepare a new draft)
- Tagetes (TWO/31/9; France to prepare a new document)
- *Telopia* (Australia to prepare a new document by the end of March 1999)
- Thyme (TWO/31/8; France to collect remarks; also from the TWV)
- *Zantedeschia* (TWO/31/11; South Africa to prepare a new draft)
- *Celosia* (the Netherlands to prepare a new document by the end of March 1999).

95. In view of the long list of Test Guidelines planned, the Working Party agreed to improve the practice of selecting for each of the species in the above planned list one leading expert and asked the other countries whether they have a special interest in that species and would be willing to cooperate with the leading expert by correspondence in the preparation of a more advanced document. An amended list of species and their leading experts is reproduced as Annex II to this report. The leading experts will prepare a new draft, unless otherwise stated, by the end of January 1999 for comments to be submitted to them. Depending on the comments, either a summary of comments or a new draft will be prepared by them before July 15, 1999.

Chairmanship

96. The Working Party noted that the chairmanship of Mr. Joost Barendrecht would expire with the ordinary session of the Council in 1999. As the last session of the Technical Committee before that session of the Council would be held before the next session of the Working Party it was necessary to already now make a proposal for a candidate for chairmanship for that session. The Working Party suggested to the Technical Committee that it proposed to the Council to elect Mrs. Elisabeth Scott (United Kingdom) as chairman to succeed Mr. Barendrecht as of October 1999.

Visits

97. In the late afternoon of November 17, 1998, the Working Party visited the Botanic Garden of Christchurch where it was given a lecture on the indigenous plants of New Zealand and received a guided tour through the Garden.

98. In the afternoon of November 19, 1998, the Working Party visited Lavender Downs at West Melton, where it received a lecture on the history and background of the Plant Variety Rights' system in New Zealand and on the testing systems in New Zealand. The lectures were followed by a visit to the lavender collection and nursery and the testing of lavender varieties on the premises of a breeder.

99. In the afternoon of November 19, 1998, the Working Party also visited the Crop and Food Research Institute at the Canterbury Agriculture and Science Center at Lincoln, where the New Zealand Plant Variety Rights' Office is located. It listened to lectures on research and development in New Zealand and their funding, and on new developments for the New Zealand floriculture industry in the next century. It also visited the herbarium at the Landcare Research Institute where it received a lecture on the selection and use by Maori of varieties of New Zealand flora and on the current variety development from New Zealand flora with special emphasis on the breeding of *Leptospermum*, followed by a visit to the *Leptospermum* collection in the nursery.

100. On November 21, the Working Party visited a *Protea* nursery near the town of Akaroa and also Akaroa itself. It also had a boat trip on Akaroa Harbor with its unique wildlife.

101. This report has been adopted by correspondence.

[Three annexes follow]

ANNEX I

LIST OF PARTICIPANTS

I. MEMBER STATES

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[Annex II follows]

ANNEX II

LIST OF LEADING EXPERTS

<i>Species</i>	Basic Document	Leading experts (for addresses see attached list)	Interested experts (countries) (for name of experts see attached list)
Calla Lily	TWO/31/11 + new draft by end of January 1999	Mrs. Buitendag, ZA	IL, NL, NZ
<i>Calluna</i>	TG/94/3 + new draft by end of January 1999	Mrs. Menne, DE	NL
<i>Celosia</i>	By end of March 1999	Mr. Barendrecht, NL	DE, IL
<i>Chrysanthemum</i>	TWO/30/8 + new draft by end of January 1999	Miss Scott, GB	CA, DE, FR, IL, JP, KE, KR, NL, EU
<i>Cupressus</i>	By end of March 1999	Mr. Brand, FR	DE, NZ
<i>Dendrobium</i>	By end of March 1999	Mr. Saito, JP	DE, NL
<i>Eucalyptus gunnii</i>	TWO/31/7	Mr. Brand, FR	AU, IL
<i>Eustoma</i>	TWO/31/4	Mr. Obayashi, JP	DE, IL
Geraldton Waxflower	TWO/31/13 + new draft by end of January 1999	Mr. Hulse, AU	IL, ZA
<i>Guzmania</i>	TWO/31/16	Mr. Kwaakenbos, EU	NL, ZA
<i>Hippeastrum</i>	TWO/30/6	Mr. Barendrecht, NL	-
<i>Impatiens</i>	TWO/31/9	Mr. Brand, FR	AU, CA, DE
Lavender, Lavendine	TWO/29/14 + new draft by end of January 1999	Mr. Brand, FR	AU, GB, NZ
<i>Leptospermum</i>	By end of March 1999	Mr. Hulse, AU	IL, NZ
<i>Nerium</i>	TWO/31/15	Mr. Brand, FR	DK
Ornamental Apple	TWO/31/18 + new draft by end of January 1999	Miss Scott, GB	CA, DE, FR, NL, NZ
<i>Pentas</i>	TWO/29/10	Mr. Barendrecht, NL	DE, IL
<i>Pentunia</i>	By end of January 1999	Mr. Bar-Tel, IL	AU, DE, GB, JP, NZ
<i>Poinsettia</i>	TG/24/5 + new draft by end of January 1999	Mr. Jacobsen, DK	AU, CA, DE, NL, CPVO
<i>Tagetes</i>	By end of January 1999	Mr. Brand, FR	DE, NL

Species	Basic Document	Leading experts (for addresses see attached list)	Interested experts (countries) (for name of experts see attached list)
<i>Telopia</i>	By end of March 1999	Mr. Hulse, AU	NZ
<i>Thymus</i>	TWO/31/8, first comments before the end of March 1999 + new draft by end of April 1999	Mr. Brand, FR	DE, TWV

Comments to leading experts to be sent before the dates in the second column (if a date is given) for existing documents and before July 15, 1999 for new documents to be prepared for the next session of the TWO.

[Annex III follows]

**RESULTS FROM THE SUBGROUP ON
LAVENDER AND LAVENDINE**

Main Modifications in Document TWO/29/14

- (i) Material required: To have “6” plants” instead of “10” plants
- (ii) Conduct of Tests: To have “6” plants” instead of “10” plants
- (iii) Methods and Observations: To have “6” plants” instead of “10” plants
- (iv) Grouping of varieties:

New 1: Plant: size
7: Leaf: presence of incision on margin
8: Flowering stem: lateral branches (above foliage)
19: Spike: shape
28: Spike: infertile bracts
32: Spike: color of infertile bracts
36: Corolla: color

- (v) Table of Characteristic

Characteristics

- 2 Habit (without flowering stems)
 - narrow (1)
 - bushy (2)
 - rounded (3)
 - flat bushy (4)
- 4 Intensity of grey tinge of foliage
from 1 to 9
- 5 Attitude of the outer flowering stems (...)
 - erect (3)
 - semi erect (5)
 - spreading (7)
- 6 Density ...
replace by “sparse”

- 6(a) Presence of incision on margin
absent
weakly present
strongly present
Delete the two “new” characteristics after 6
- 7 Lateral branches (above foliage)
- 8 Intensity of ramification (above the foliage)
- 9 To replace “ear” by “spike”
- 10 Length of lowest lateral branches, above foliage
- 13 After 13: add a new characteristic: Flowering stem: intensity of pubescence on main stem
- | | |
|--------|-----|
| weak | (3) |
| medium | (5) |
| strong | (7) |
- 17 Shape:
- | | |
|------------------|-----|
| conical | (1) |
| truncate | (2) |
| cylindric | (3) |
| fusiform | (4) |
| narrow conical | (5) |
| conical fusiform | (6) |
- 18 Distance between ... (...excluded)
delete “spica group only”
from very short (1) to very long (9)
- 20 Deleted
- 22 Deleted
- 21(a) Width of fertile bracts: replace “wide” (7) by “broad” (7)
- New infertile bracts (stoechas group only)
- 22 Before 22: add a new characteristic: color of infertile bract (varieties in stoechas group only), indicate RHS color
- 23 Calyx: color
- 24 Calyx: intensity of pubescence
- 25 Corolla: color

26 Corolla: intensity of color

28 Deleted (time of beginning of vegetative growth)

27 Time of beginning of flowering

No change for the other characteristics not mentioned in this summary

Example varieties and drawings revised, to be produced by France

A new version to be produced by France in cooperation with Australia, New Zealand and the United Kingdom.

[End of document]