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GENEVA

TECHNICAL COMMITTEE

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MATTERS ARISING FROM THE 2000 SESSIONS OF THE TECHNICAL WORKING PARTIES TO BE DEALT WITH BY THE TECHNICAL COMMITTEE

Document prepared by the Office of the Union

1. This document contains three parts in its Annex:

(a) The first part "Matters for information and for a possible decision to be taken by the Committee" identifies matters raised by the Technical Working Parties (hereinafter referred to as "the TWPs"), which may require a decision to be taken by the Technical Committee (hereinafter referred to as "the Committee"). The Office of the Union has highlighted aspects where the Committee may wish to take a decision by introducing a proposed decision paragraph shown in italics. This first part includes sections on matters to be considered in the development of the TGP documents (see pages 9 to 20). Draft TGP documents will be presented to the Committee for approval, once they are prepared, but the Committee may wish to take this opportunity to comment on certain aspects at this early stage of development.

(b) The second part "Matters already considered in the development of document TC/37/5" notes matters, which have been considered in the preparation of document TC/37/5 "Latest Working Document for a New Revised "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants (TG/1/3)" (see document TC/37/1, agenda item 6)

(c) The third part "Matters for information only" identifies matters for information only.

2. To shorten references to the various TWPs and the BMT in this document, use is made of the following codes, which are also used to designate their documents:

TWA: Technical Working Party for Agricultural Crops;
TWC: Technical Working Party on Automation and Computer Programs;
TWF: Technical Working Party for Fruit Crops;
TWO: Technical Working Party for Ornamental Plants and Forest Trees;
TWV: Technical Working Party for Vegetables;
BMT: Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular.

[Annex follows]

ANNEX

MATTERS ARISING FROM THE 2000 SESSIONS OF THE TECHNICAL WORKING PARTIES TO BE DEALT WITH BY THE COMMITTEE

I. MATTERS FOR INFORMATION AND FOR A POSSIBLE DECISION TO BE TAKEN BY THE COMMITTEE

Consideration of Varieties of Common Knowledge in the DUS Examination

(a) Variation in National Reference Collections

1. The TWA discussed the information provided in document TWA/29/19 about the management of reference collections. The paper included information submitted by fourteen countries and concluded that the sizes of the reference collections varied from country to country and that there was little interaction between countries of different regions of the world. It was also mentioned that a big problem for the preparation of the document was that there was no definition of reference collection.

(See document TWA/29/21 Prov., paragraphs 45 and 46).

(b) Access to Inbred Lines

2. The TWV noted that, while applications for inbred lines are increasing, the secrecy over protected inbred lines by the breeders made it difficult for testing authorities to have access to propagating material or other technical information of inbred lines, especially those protected in other countries, for the purpose of the assessment of distinctness.

(See document TWV/34/15 Prov., paragraph 6).

(c) Variety Grouping

3. The TWV discussed the use of agronomic or economic types, such as growth type (e.g. spring or winter), main use (e.g. ornamental or fruit) and fruit types (e.g. pumpkin, zucchini) for the purpose of grouping varieties or applying, at least in part, different sets of characteristics or different ranges of expression. It discussed the potential for incorrect decisions on distinctions in the use of such "types," which, as a result, automatically distinguish all the varieties of one type from all the varieties of the other types without comparison of individual varieties across different types. It finally decided to require the use of such "types" in Test Guidelines to be accompanied with the clear written definition of each type preferably by using characteristics.

(See document TWV/34/15 Prov., paragraphs 19 and 20).

(d) Inclusion of Variety Descriptions on UPOV-ROM

4. Most experts at the TWA agreed in the usefulness of having descriptive information in the UPOV-ROM database and recalled the decision taken at the Committee in April 2000 approving the inclusion of the information of item 5 of the Technical Questionnaire of the UPOV Test Guidelines. Nevertheless, there were some concerns in the proper use of this information and it was also suggested that some guidelines should be developed. Several actions were proposed to continue the work in this issue, (a) to compare descriptions taken by different national offices on seed samples of the same variety and (b) to compare already existing data of already described varieties. One expert proposed to have a more practical approach for the management of reference collections, using grouping characteristics, molecular markers and statistical analysis and to centralize this activity and to distribute the

information to the different testing stations. New documents on plant variety description and the environmental effect on barley and wheat and a presentation of software using phenotypic distance for distinctness would be prepared for the next TWA meeting.

(See document TWA/29/21 Prov., paragraphs 47 to 49).

5. The Committee is invited to advise the Administrative and Legal Committee (CAJ) of these practical difficulties in considering varieties of common knowledge in the DUS test and, in addition, to identify the potential benefits of inclusion of variety description information on the UPOV-ROM. In particular, the Committee is invited to highlight these aspects for the CAJ in its consideration of document CAJ/43/5 "Publication of Variety Descriptions."

DUS Testing of Seed Raised Ornamentals

6. The TWO reviewed document TWO/33/16 prepared by the Chairperson as a summary of the meeting with ASSINSEL and a group of TWO experts. It would need further discussion and development for the improvement of the current situation as breeders of such varieties were not always familiar with the workings of the DUS-trials system. A number of applications were anticipated for seed raised ornamentals and as UPOV was revising the General Introduction it would be a good moment to improve the understanding.

(See document TWO/33/17, paragraph 15).

7. Breeders of seed raised ornamentals felt they could be faced with DUS testing procedures which would be more appropriate to vegetatively propagated plants, and that the requirements would be too rigid. It should be stressed that all varieties must be tested according to their method of breeding and propagation, and Seed Raised Ornamentals would be tested in an appropriate way and not according to the standard for vegetatively propagated material.

(See document TWO/33/17, paragraph 16).

8. It was very important for the applicants to supply full details of the breeding system and propagation method for their varieties, and for UPOV TWPs to ensure that consistent methods and standards were developed and applied for different types. The Technical Questionnaire of the Test Guidelines concerning TGP documents should be improved accordingly.

(See document TWO/33/17, paragraph 17).

9. Common practice in seed raised ornamentals has been to continue to reselect and improve varieties after their commercial launch. It had to be pointed out that clonal material was also subject to constant reselection, but that there was a difference between selection for maintenance and selection to improve and change the variety. If the variety was moved too far from its original description it became a new variety and separate protection had to be applied for – that was also the situation with clonally propagated material.

(See document TWO/33/17, paragraph 18).

10. The problem of the quantity of seed needed for DUS-Tests was also discussed. Offices needed to be realistic here because in some cases the seeds in the 2 or 3 grams required for the test could produce hundreds or even thousands of plants.

(See document TWO/33/17, paragraph 19).

11. The TWO concluded that the meeting with ASSINSEL, and the discussion continued by the TWO, had been very useful in clarifying a number of issues and establishing channels of communication for the discussion of technical matters. The ASSINSEL representative would make a presentation on the results of the discussion to their meeting in August 2000 in Copenhagen. The experts of the TWO would continue their exchange of information on these matters via e-mail. Some practical points were to be discussed later in the meeting during the discussion on the General Introduction.

(See document TWO/33/17, paragraph 20).

12. The Committee is invited to confirm that all varieties should be tested according to the particular features of their propagation according to the principles in the General Introduction.

Status of the Technical Questionnaire

13. The TWV considered the status of the Technical Questionnaire. One expert asked whether wrong information provided by applicants in the Technical Questionnaire could be grounds for refusal of the application. For example, if a variety description provided by an applicant for a candidate variety does not match the variety description resulting from DUS trial, should the application be rejected? Several experts questioned the legal basis for rejecting the application. However, it was concluded that it would be highly dependent on individual cases and national legislation. In general, the TWV shared the view that the wrong information in the Technical Questionnaire alone should not result in the automatic rejection of the application.

14. The TWA discussed the action, which should be taken when the information provided by the applicant was wrong. Different positions were presented. While some countries rejected the application, others said that the decision depended on the type of error. One expert said that if the applicant claimed that it was because of an accidental mistake, when filling in the application form, it had to be accepted.

(See document TWA/29/21 Prov., paragraph 41).

15. The Committee is invited to request advice from the CAJ on the status of the Technical Questionnaire in relation to the application and to incorporate this advice into document TGP/5 "Experience and Cooperation in DUS Testing" and/or document TGP/7 "Development of Test Guidelines."

Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular

16. The TWA noted the discussion at the sixth session of the BMT and its proposal to the Committee to set up crop subgroups for detailed discussion on the possible use of molecular techniques in DUS testing. After a brief discussion, the TWA agreed upon the following Chairpersons: Mr. Peter Button (United Kingdom) for wheat, Mrs. Beate Rücker (Germany) for maize and Mrs. Françoise Blouet (France) for oilseed rape.

17. The TWV nominated Mr. Richard Brand (France) as Chairperson of the Subgroup for Tomato.

18. The TWO nominated Mr. Joost Barendrecht (Netherlands) as Chairperson of the Subgroup for Rose.

(See document TWO/33/17, paragraph 12).

19. The TWF discussed the proposal of the Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular (BMT), approved by the Committee to establish *ad hoc* crop subgroups on molecular techniques for each of five selected crops. The TWF expressed interest in the BMT proposal and decided to ask the Committee to add to the *ad hoc* crop subgroups the subgroup for Peach species. If the decision of the Committee was positive the TWF would agree to nominate Mr. Raymond Saunier (France) as Chairperson of the Subgroup for Peach species.

(See document TWF/31/12, paragraph 10).

20. The Committee is invited to consider if an ad hoc crop subgroup should be established for Peach species.

Distribution of Documents

21. The TWO and TWF decided to continue to improve the distribution of documents by the Office of the Union to the experts. In some cases distribution by ordinary mail has been rather slow, and the TWO supported the suggestion made by the Office of the Union to send the documents by e-mail also.

Arrangements for DUS Testing

22. The TWA will continue the discussion of breeder involvement in DUS Testing at the next meeting and requested the Office of the Union to prepare a questionnaire on the involvement of the breeder in DUS testing based on the previous document TC/32/4, including the suggestions and comments made at the TWA session.

(See document TWA/29/21 Prov., paragraphs 63 to 66).

23. The Committee is invited to review the draft questionnaire prepared by the Office of the Union (see document TC/37/7).

Development and Revision of Test Guidelines

24. The TWF made a proposal for the Committee to improve the practice for the preparation of the Test Guidelines whereby the submission of the draft of the new Test Guidelines to the professional organizations for comments should be done in parallel with the submission of the Draft Test Guidelines to the Committee for final adoption, subject to no important comments from the professional organizations.

(See document TWF/31/12, paragraph 34).

25. The TWV discussed possible procedures for speeding up the preparation or revision of Test Guidelines and for updating specific characteristics within Test Guidelines without their entire revision. It also noted the importance of prioritizing the revision of many out-of-date Test Guidelines for major vegetable species, rather than the preparation of new Test Guidelines for minor species, and of preparing UPOV Test Guidelines for major tropical species in view of expanding membership worldwide.

26. The TWV agreed to seek, where appropriate, the possibility of shortening the number of sessions needed for discussion of Draft Test Guidelines at the TWV level to only one session. If the discussion on Draft Test Guidelines are completed in the first session, and if all necessary information were available, the Draft Test Guidelines could be sent directly to the Committee in parallel with the professional organizations. If no significant comments were received from the professional organizations, the Draft Test Guidelines would be discussed in the Committee for adoption.

27. The TWV also decided to send the following proposals to the Committee:

28. Web site collection of characteristics not included in UPOV Test Guidelines: UPOV should establish a database of characteristics not included in UPOV Test Guidelines, but used at a national level (e.g. new characteristics, regionally important characteristics and non-routine characteristics) at the UPOV Web site (“member States only” section) under each individual Test Guidelines document reference with a view to facilitating information exchange and harmonization among member States.

29. Addition/change/deletion of characteristics without entire revision of the UPOV Test Guidelines: In order to facilitate interim updating of UPOV Test Guidelines for important characteristics, the Committee should allow the following process:

(i) Experts of the TWPs may submit a proposal for the addition of new characteristics or deletion or amendment of inappropriate characteristics, for any Test Guidelines document with all the necessary information to the Office of the Union no later than three months before the session of the TWV.

(ii) The Office of the Union distributes the proposals to all experts of the TWV and the professional organizations with a deadline for comment (e.g., one month before the session).

(iii) The TWV discusses the new characteristics at their sessions unless any major objections are received.

(iv) The Committee adopts the new characteristics, if appropriate, and the Office of the Union updates the Test Guidelines. In addition, the Committee will advise, on the basis of guidance from the TWV and the Office of the Union, if the Test Guidelines must be programmed for a full revision as a condition of the change.

(See document TWV/34/15 Prov., paragraphs 15 to 18).

30. The Committee is invited to approve, in principle, the revision of important technical aspects of Test Guidelines without a requirement for the whole document to be revised and to request the Office of the Union, in discussion with the TWPs, to develop guidelines for approval by the Committee and incorporation into document TGP/7 "Development of Test Guidelines."

Matters to be Considered in the Development of Associated TGP Documents

(a) Procedure for Developing TGP Documents

31. The TWV made the following proposal concerning the preparation of associated documents:

(i) The overview of the latest progress of the preparation for associated documents needed to be prepared with indications of their current status, for example, "existing or preparation is already completed," "under preparation" and "not yet prepared."

(ii) In order to specify the latest version of associated documents in effect, the revision of an associated document would need the indication on the cover page of the document: e.g. "Document … has been replaced by this document" and to provide a summary of this in the next table of associated documents.

(See document TWV/34/15 Prov., paragraph 28).

32. It was suggested at the TWA to avoid sending overly lengthy documents for comment in order to allow experts to concentrate on main topics.

(See document TWA/29/21 Prov., paragraphs 31 and 31).

33. Experts at the TWC proposed having guidance in how to prepare the complementary documents to the General Introduction to know what was expected from the experts working on them and that each TGP should have an overview document.

(See document TWC/18/15 Prov., paragraph 28).

34. The Committee is invited to identify the TGP documents, which should be prioritized by the TWPs.

(b) Document TGP/4 "Management of Reference Collections"

35. The TWC discussed possible uses of plant variety descriptions for the selections of most similar varieties to a candidate one in document TWC/18/14. The objective was to know the possible most similar varieties before planning the field trials. The document is a continuation of document TWC/17/12 "Special Applications of DUS Variety Descriptions." The objective of the paper was to study the types of data and the distance functions involved in the study of variety descriptions, comparisons of evaluations made on variety descriptions for a period of years and comparisons of different versions of method (each characteristic has the same importance vs. the weighting of the characteristics). In the proposed method, the first step was to calculate the similarities, and secondly the calculation of the histogram of frequencies of similarities.

36. Until then, the method had only been applied to winter barley varieties showing a good level of repeatability. The procedure would be applied to varieties of other crops to get a more general statement. The TWC asked the expert to continue the research with the method.

(See document TWC/18/15 Prov., paragraphs 51 to 53).

(c) Document TGP/5 "Experience and Cooperation in DUS Testing"

37. Some experts at the TWA considered it useful to have some guidance for the preparation of an interim report of the technical examination. It was suggested that a model for this purpose should be developed and that the Office of the Union note the proposal for future development in the revision of the General Introduction.

(See document TWA/29/12, paragraph 27).

(d) Document TGP/6 "Arrangements for DUS Testing"

38. Extensive discussion revealed there was still a certain amount of confusion about methods of arranging DUS tests, and the TWO finally proposed that it would be helpful to extend the TGP document to include an explanation of the three main testing systems: all work by officials, trials grown by the applicant but all other work done by officials, and all work done by the applicant. The TWO decided that experts from Australia, Canada, Germany, the European Union, France, Israel, Japan and New Zealand would submit the information to the expert from Australia who, on the basis of the information collected, would prepare the document in cooperation with their TWA expert. The document should be sent to the Office of the Union by the coordinator from Australia by the end of June 2001.

39. The TWF supported the idea of preparing a document on the basis of a Circular prepared by the Office of the Union as had been decided by the TWA and, with some modification concerning the Circular, by the TWO. The expert from Australia expressed her disagreement with the comment on document TGP/6 in Circular U 2976 that breeding testing was mainly useful in species with few applications.

40. The TWA discussed document TGP/6 "DUS Testing Done by the Applicant/Breeder" (see document TC/36/7, pages 55 to 61) and the comments on it (see Circular U 2976). Document TGP/6 contained three parts. Two were documents that had been developed some time ago: document C/27/15 "Declaration of the Conditions for the Examination of a Variety Based Upon Trials Carried out by or on Behalf of the Breeder," and document TC/32/4 "Level of Involvement of the Applicant in the Growing Test." Another document "DUS Testing by or on Behalf of the Breeder" (TGP/6(a)), had been prepared by the expert from Australia. In it, he explained that the degree of involvement of the applicant may vary from a system, for example, where the applicant made all the tests, to another where the applicant made the first year of testing and the national authority the second. There were some situations in-between, where for some species the test was made by the applicant and for others by the national authority. Several aspect of the so called "Breeder's Testing System were discussed at the TWA. The tests should be done according to test guidelines, they should be kept and be accessible for checking by the official authority and an official sample of the variety must be deposited. It was also proposed some factor that might influence the adoption of a breeder's testing system, such as diversity of environments, availability of knowledge and expertise in the national authority, easy implementation, minimize costs. Some advantageous and disadvantages of the system were finally mentioned. The expert from ASSINSEL recalled the decrease in the cost to the national authority in the breeder's testing system usually becomes an extra cost for the breeders. Several experts considered that the major risk of that system was the selection of the most similar variety. Some experts considered that breeder's testing system and centralized testing system were not opposed. Most experts at the TWA were in favor of updating information on the development of the breeder's testing system in the UPOV member States.

41. The TWA will continue the discussion of this subject at the next meeting and requested the Office of the Union to prepare a questionnaire on the involvement of the breeder in DUS testing based on the previous document TC/32/4, including the suggestions and comments made at the TWA session.

(See document TWA/29/21 Prov., paragraphs 63 to 66).

(e) Document TGP/7 "Development of Test Guidelines:" Procedure for Development and Revision

42. The TWF made a proposal for the Committee to improve the practice for the preparation of the Test Guidelines whereby the submission of the draft of the new Test Guidelines to the professional organizations for comments should be done in parallel with the submission of the Draft Test Guidelines to the Committee for final adoption, subject to no important comments from the professional organizations.

(See document TWF/31/12, paragraph 34).

43. The TWV discussed possible procedures for speeding up the preparation or revision of Test Guidelines and for updating specific characteristics within Test Guidelines without their entire revision. It also noted the importance of prioritizing the revision of many out-of-date Test Guidelines for major vegetable species, rather than the preparation of new Test Guidelines for minor species, and of preparing UPOV Test Guidelines for major tropical species in view of expanding membership worldwide.

44. The TWV agreed to seek, where appropriate, the possibility of shortening the number of sessions needed for discussion of Draft Test Guidelines at the TWV level to only one session. If the discussion on Draft Test Guidelines are completed in the first session, and if all necessary information were available, the Draft Test Guidelines could be sent directly to the Committee in parallel with the professional organizations. If no significant comments were received from the professional organizations, the Draft Test Guidelines would be discussed in the Committee for adoption.

45. The TWV also decided to send specific proposals to the Committee.

(See section 8, above and document TWV/34/15 Prov., paragraphs 15 to 18).

(f) Document TGP/7 "Development of Test Guidelines:" Standard Wording

46. The Chairperson suggested that the TWO should elaborate the standardized layout for new Test Guidelines preparation. It was agreed that experts from AU, DE, GB and ZA would prepare a document, with model wording for chapters I to VI of the Test Guidelines and a template for the Guidelines structure, by the end of August 2000 for circulation to all experts of the TWO. Once agreed, any changes in standard wording could be entered in the document which would then always be an up-to-date reference. If accepted by the Editorial Committee, the document would form part of an expanded TGP/17 (Model Technical Questionnaire); if not, it would be a TWO document.

(See document TWO/33/17, paragraph 7).

(g) Document TGP/7 "Development of Test Guidelines:" Title and Coverage

47. The TWV discussed the problem resulting from ambiguities over the Latin names. The Latin names define the coverage of each Test Guidelines and, in many cases, play significant roles in the judgement of distinctness through classifying varieties into different groups (species) which will not be compared. However, the classification by Latin names was not always obvious because of the lack of clear definitions of Latin names or the existence of different schools of plant nomenclature.

48. In cases where species cannot be easily classified by the nomenclature, it was proposed to handle a set of such species in one Test Guidelines document, rather than preparing individual Test Guidelines for each species. This approach would minimize the risk of the misjudgment for distinctness caused by the ambiguous classification by the Latin names. On the other hand, the TWV requested the Office of the Union to contact ISTA and relevant organizations for plant nomenclature and to propose a standard reference of plant nomenclature for UPOV Test Guidelines.

(See document TWV/34/15 Prov., paragraphs 8 to 10).

49. As explained in documents TC/37/6 "Review of UPOV Information Databases and Service," the Office of the Union have considered that the introduction of a UPOV "taxon code" may help to address this problem. If the coverage of the Test Guidelines is established according to such a UPOV taxon code it would be possible, through an actively maintained and accessible database, for users to identify all Latin and common names (in all UPOV languages) covered by the code and therefore, Test Guidelines.

(h) Document TGP/7 "Development of Test Guidelines:" Divisions Within Test Guidelines

50. The TWV discussed the use of agronomic or economic types, such as growth type (e.g. spring or winter), main use (e.g., ornamental or fruit) and fruit types (e.g. pumpkin, zucchini) for the purpose of grouping varieties or applying, at least in part, different sets of characteristics or different ranges of expression. It discussed the potential for incorrect decisions on distinctions in the use of such "types," which, as a result, automatically distinguish all the varieties of one type from all the varieties of the other types without comparison of individual varieties across different types. It finally decided to require the use of such "types" in Test Guidelines to be accompanied with the clear written definition of each type preferably by using characteristics.

(See document TWV/34/15 Prov., paragraphs 19 and 20).

(i) Document TGP/7 "Development of Test Guidelines:" Quantity of Plant Material

51. The TWV found document TWV/34/11, which was prepared by an expert from the Netherlands, reasonable and useful and proposed a systematic approach for determining the required amount of plant material on the basis of a formula to produce the required number of plants in the field. The proposal would restrict the amount of plant material to that really needed and, in addition, address the question frequently received from applicants as to why so much plant material should be submitted. The TWV decided to follow the proposal in principle for preparation of UPOV Test Guidelines and to send the document to other TWPs for their reference.

(See document TWV/34/15 Prov., paragraphs 21 to 24).

52. The TWF discussed the document prepared by the Chairperson on spare plants. This problem was rather important for testing in fruit species as planting material was comparatively expensive, more time was needed to establish the plot and there were some problems if the number of plants was not enough for performing the test (e.g. if the fruit tree had died). In some member States it was not a problem at all, as, for example, in Canada fruit trees were examined in commercial orchards where the number of plants was always sufficient. The expert from Germany explained that his Office asked for additional planting material to avoid the risk of the repetition of the test but it was voluntary for the applicant. The TWF summarized its opinion as follows: in the Test Guidelines, the number of plants required for the test should be indicated as a minimal quantity, but the national authorities might ask for additional planting material if it were found necessary.

(See document TWF/31/12, paragraph 8).

(j) Document TGP/7 "Development of Test Guidelines:" Example Varieties

53. The TWV reaffirmed, in view of the expanding UPOV membership, the need to establish additional sets of example varieties in UPOV Test Guidelines for major regions with different climates. It was also encouraged by an expert from ASSINSEL to prepare several sets of example varieties and to update example varieties in UPOV Test Guidelines more frequently, because the presence of meaningful example varieties in UPOV Test Guidelines is very useful for breeders.

54. However, the TWV also warned of the risk that example varieties independently prepared in different locations might not always produce the same expression, especially in the case of quantitative and some pseudo-qualitative characteristics. Attempts for establishing concordance among different sets, such as ring tests, were discussed. However, several experts expressed their doubts on requiring such expensive tests and their concerns that they might delay the completion of the preparation of Test Guidelines.

55. The TWV agreed to submit the following suggestions to the Committee:

(i) Additional sets of example varieties and updated lists of example varieties should be added to UPOV Test Guidelines (possibly as Annexes) or be placed on the UPOV Web site according to the notification from member States.

(ii) The testing location which established the set of example varieties in the Table of Characteristics should be clearly indicated in UPOV Test Guidelines.

(iii) Considering the limited availability of example varieties, not only drawings, but also photographs should be accepted in UPOV Test Guidelines for promoting the harmonized interpretation of characteristics.

(See document TWV/34/15 Prov., paragraphs 35 to 39).

56. The TWO stressed that Example Varieties were guides only. It also agreed that it was possible to have a second set of Example Varieties, and that it could support the replacement of example varieties by diagrams where possible as the high turnover of varieties made the current lists obsolete very quickly. The TWO discussed the proposals “About Example Varieties” prepared by the expert from France (Mr. Joël Guiard) and concluded that the document on that matter should be promoted.

57. The TWF first of all decided to stress that example varieties were guides only. The expert from Hungary expressed his disagreement with the sentence in the Annex to Circular U 2976: “States of expression often represent a range and two example varieties could show the upper and lower limit of that range.” The TWF agreed in general that the situation with example varieties in the UPOV Test Guidelines should be improved mainly because the number of member States had increased and new geographical regions were involved in UPOV activity. It was very important to explain to new member States what example variety meant in practice as in some cases misunderstandings had been reported. Many experts reported on problems arising from variety descriptions they received from other member States. Many States wanted to have their own set of example varieties. It would be important to set up guidelines for establishing the set of example varieties to follow if a State decided to have its own set, to clarify the meaning of “high-low,” “wide-narrow” etc., in a given case, taking into consideration the environmental influence. The expert from Australia suggested a conception of so-called “benchmark varieties,” instead of the example varieties as they existed at present in Test Guidelines. Benchmark varieties could be established from which a State could choose according to its environmental conditions. The TWF decided to support all statements mentioned in the proposals “About Example Varieties” which had been prepared before the session by the expert from France (Mr. Joël Guiard) and concluded that the document on this matter should be promoted. It also suggested adding as an annex to the Test Guidelines the list of example varieties used in a given Test Guidelines document mentioning the country which had proposed the variety. The expert from Spain did not agree with the proposal. The experts from Australia and Canada volunteered to prepare a document

"Quantitative characteristics. Environment influence and plant variety description." The expert from Australia would also prepare a document on the use of benchmark varieties. Both documents would be discussed at the next session of the TWF concerning complementary documents for the General Introduction.

58. Discussion at the TWA were based on document TWA/29/20. The document reproduced the text of a proposal made by the Delegation of France at the thirty-sixth session of the Committee containing several points to be considered when discussing a future approach in the selection and listing of example varieties for the UPOV Test Guidelines. It highlighted the difficulty in agreeing on the list of example varieties as more countries joined UPOV. Pointing out the rapid turnover of varieties, which made the list quickly out of date. Several points for consideration were proposed: (a) no real need to have example varieties where drawings could be available for a given characteristic; (b) the possibility of having agreed example varieties for characteristics slightly influenced by the environment; (c) to have a regional or national list of example varieties for characteristics susceptible to the environment. The document suggested removing the list of example varieties from the UPOV Test Guidelines, but in that case the whole range of the reference collection concerned should be considered and it should be possible to access the example varieties used in a particular country or region.

59. Several problems with the list of example varieties in the UPOV Test Guidelines were mentioned by experts at the TWA such as lack of access to the example varieties listed in the UPOV Test Guidelines and no information on the country that proposed them. Some experts proposed including the list of example varieties in an annex to the Test Guidelines, which would be easier to revise than the whole document and to add the country where they were used. A few experts mentioned that they hardly ever used the example varieties listed in the UPOV Test Guidelines while another explained that he used the UPOV example varieties as far as possible but that for quantitative characteristics they specifically tried to have their own set of example varieties which represented the variability of the crop in his country. One expert clarified that the role of example varieties was to be used as standard for the expression of characteristics and that the creation of a descriptive database would help for that purpose. It was also suggested the possibility of including digital pictures and having links to pictures in the document in digital format.

60. The TWA agreed that comments on possible action concerning the selection and listing of example varieties should be sent to the expert from France in order to continue the development of the document.

(See document TWA/29/21 Prov., paragraphs 42 and 76 to 78).

(k) Document TGP/7 "Development of Test Guidelines:" Description of Flower Color

61. The TWO discussed the proposal sent by the expert from New Zealand, that the wider use of the RHS Colour Chart should be limited in the Technical Questionnaire of Test Guidelines because experience had shown that only a few applicants had access to, or any knowledge of, the Chart. If flower color was used as a grouping character the use of color groups was preferable and these supplied the necessary information at the initial stage of testing. The TWO agreed with the proposal to return to the former system of presenting the two alternatives, either the RHS Colour Chart or color group.

(See document TWO/33/17, paragraph 8).

(l) Document TGP/7 "Development of Test Guidelines:" Technical Questionnaire

62. The TWO considered that more than one model might be necessary. The following proposals were made by the TWO related to a model for ornamental plants:

Item 1: To read "Genus or Species," if a genus is indicated it should be followed by "Indicate species" if appropriate.

Item 2: Phone and fax numbers and e-mail address to be added

Item 4: Example should cover other Working Parties as well: for ornamental plants it should include the standard wording (seedling, mutation, discovery) and then add under 4.2 "Method of reproduction: cuttings, in vitro, other (specify method)" all as indicated in the latest Gerbera document.

Item 5: To use color groups as an alternative to the RHS Colour Chart, with appropriate wording.

Item 6: The TWO continued to put forward its existing proposal for the rewording of this item.

Item 7.2: For the TWP concerned, to be added:

(a) Does the variety need special conditions for cultivation"

No [ ]
Yes (specify) [ ]

(b) Use of the variety

cut flower [ ]
pot plant [ ]
garden plant [ ]
other (specify) [ ]

63. The TWF decided to support the proposal made by the TWO for the amended Chapter 6 (document TC/36/7, page 146). It disagreed with the proposal to add a new section 9 "Declaration of Freedom from Secondary Factors," because the existing Technical Questionnaire had sufficient possibilities to secure the information needed, for example in Chapter 4.5 "Other information."

(m) Document TGP/8 "Good Statistical Practices for DUS Testing"

64. The TWC noted document TWC/18/9 considering that the present way of classification of characteristics into "truly qualitative," "quantitative" and "pseudo-qualitative" made no clear separation between the characteristics type, the scale for the assessed data and transformation of these data into a variety description. It considered that there were three situations from the description of the characteristic point of view. One was the way the characteristic was expressed in the trial, with a high level of information. Secondly the data

recorded for the evaluation of the characteristic, with a medium level of information, and finally the data used for variety description, which had a low level of information. The paper considered the second and third situation. The TWC discussed the terminology and its definition in order to develop harmonized proposal for discussion at the TWPs. Some experts proposed drafting a table linking the position of the crop experts and the position of the statisticians in relation to the type of characteristics and type of data and discussion also focused in the different meaning of the words “quantitative” and “qualitative” for crop experts and statisticians. The TWV agreed that a new document should be prepared and circulated to the participants of the meeting for comments and that the new paper should form part of document TGP/8.

(See document TWC/18/15 Prov., paragraphs 35 to 39).

65. The TWC noted documents TWC/18/4, TWC/18/5 and TWC/18/6 with information of different trials using incomplete block design. The TWC concluded that it had been well established that for characteristics strongly linked to the productivity, the use of more efficient trial designs were beneficial where large number of varieties were tested. For some years the TWC had been exploring the potential gains from enhanced designs analysis for field DUS trials. The set of papers dealing with design issues that had been presented at the eighteenth session of the TWC looked at the potential gain in trial efficiency from the use of alpha design in a range of crops and situations. Further work was still required to quantify all gains in trial efficiency and under what circumstances such gains may be achieved. The TWC would welcome comments and information from other TWPs on the existing use of these approaches.

(See document TWC/18/15 Prov., paragraphs 40 to 45 and 48).

66. TWC discussed document TWC/18/7 proposing statistical principles for the use of non-routinely examined characteristics in the differentiation of a candidate variety. The document showed results from two trials with a very small difference occurring in the first trial and a clear difference in the second trial. It was explained that two sources of variety-by-environment interaction were operating, both important, but the between-trials source was more important because it was not easy to limit the effect of it through increased replication of the trials and this source of variation determined how well the results would be replicated (robustness). It was proposed that appropriate analysis in that case was one that combined the data from the two trials. It was also proposed that uniformity should be checked by comparison with the closest neighbor and that, in practice, in a special test it was not possible to have the same rigor as for standard characteristics.

67. On the one hand some experts at the TWC considered that uniformity should be assessed for every characteristic used for distinctness, including any special trial. On the other hand other experts considered that the use of special trials was in line with the use of supporting evidence and that crop experts had experience in the examination of the varieties and they should know if there were problems with the uniformity of the variety.

(See document TWC/18/15 Prov., paragraphs 46 and 47).

(n) Document TGP/9 "Examining Distinctness"

68. Process for Establishing Distinctness: The TWV reviewed the process for establishing distinctness: starting from varieties of common knowledge, consideration of the reference collection, narrowing down comparable varieties for a candidate variety and then conducting a comparative growing trial, on the basis of document TWA/29/8 and the schematic diagram presented by the Office of the Union.

69. Information provided in Technical Questionnaire: The TWV also discussed the usefulness of information provided by applicants in Technical Questionnaires. It confirmed that grouping (or prescreening) and search for similar varieties in the process of establishing distinctness would be done with the help of all available information, the origin of the variety, similar varieties and the applicant's observation of a number of characteristics. However, several experts stressed the importance of evaluating the reliability of such information. In particular, reliability and consistency should be required for grouping characteristics (as criteria). Possible environmental effects on grouping characteristics should be taken into account before their use. An expert also gave a warning on the risk of a computer-based searching system and stressed the importance of total judgement of crop experts with all given information.

70. Use of Variety Descriptions: During the session of the TWV, several examples were reported that different states of characteristics had been observed in different testing locations for the same variety, for example, earliness of soybean varieties. The TWV noted that characteristics susceptible to daylight or temperature should be treated with special care. It implies that only variety descriptions for reliable and less environmentally influenced characteristics (= grouping characteristics) should be used in the process of establishing distinctness using variety descriptions.

(See document TWV/34/15 Prov., paragraphs 27 to 30, 39).

71. The TWC agreed that the document TWC/18/10 could be split into distinctness, which should go to document TGP/9, and uniformity, which should go to document TGP/10.

(See document TWC/18/15 Prov., paragraph 30).

72. The coordinator of documents TGP/8, TGP/9 and TGP/10 proposed that the documents used for the Workshop on Data Handling held in Kyiv on June 9 and 10, 2000, could be the basis for these documents. It was agreed by the TWC that the document "Use of Non-parametric Methods" and document "Similar Varieties" used at that workshop should go to document TGP/12 "Non-traditional Non-morphological Characteristics and Methods for Variety Testing." Several experts considered that the documents from the Workshop on Data Handling should be expanded and in some cases rewritten to be in context with the General Introduction and some authors were willing to do so. One expert considered that since the TGP documents were addressed to the crop experts, they should follow their way of working. The TWC also agreed to prepare a document called "Frequently Asked Questions" in document TGP/8.

(See document TWC/18/15 Prov., paragraph 34).

(n) Document TGP/12 "Nontraditional Characteristics and Methods for DUS Testing

73. The Draft Test Guidelines for Industrial Chicory were adopted in the last session of the Committee on the condition that the TWV agrees with the changes prepared on the suggestion of the Editorial Committee. The TWV, however, saw problems on the revised explanation on Characteristic 16 "Inulin content." The problems were (1) that in practice the inulin content might need to be observed by bulk sampling methodology and (2) the method of analyzing inulin content was protected by patent.

74. The TWV decided to request the Committee for general advice on how to handle importance characteristics where these could only be assessed, in practice, by using a bulk sample methodology or for which effective assessment methods are protected by patent.

(See document TWV/34/15 Prov., paragraphs 46 to 48).

75. The TWC noted document TWC/18/3. The document was intended to be the basis for document TGP/12. The document contained some definitions of image, digital image and image analysis. It considered the possible use of images and image analysis. It pointed out that the way of using image analysis was not very different from visual assessment or other measurements obtained in the field or in the laboratory. The TWC agreed to include the document in TGP/12 but it should also contain contributions from the other TWPs.

(See document TWC/18/15 Prov., paragraphs 31 to 33).

76. The TWC discussed about the possible use of data from more than one testing station when using the COY approach. The issue was proposed in the document TWC/18/2. In the document it was proposed that there were several reasons to explore other approaches for DUS trials than those previously mentioned, such as the existence of more than one testing station for a given crop, the possibility to have a decision within a shorter time, possible co-operation between two different countries and the possibility of carrying out more than one trial in the same year. One expert proposed the use of combined information from two testing centers according to the principles set out in the UPOV Convention and the COY approach could be used as well. In this case, soil and climatic conditions would be different and different situations might occur: (a) differences between locations were smaller than same location between years, in which case the examination would tend to be more lenient in distinctness if the same alpha level was kept; (b) differences between locations were of the same order as at the same locations between years, in which case the test was similar to the usual practice and (c) when differences between locations were bigger than on the same location between years, in which case the test would tend to be more strict than the usual practice. The document concluded that when information was available and locations sufficiently different, combined data from more than one testing center could be used for the assessment of distinctness. The advantages would be more data and information on the consistency of the differences in different environmental conditions.

77. When asked about the criteria for selecting two locations, the author of the document replied that the aim was to have consistency in the results between the locations. Some experts wondered about the real need of more than one location and also expressed some concerns on how to get a description of the variety with information from two different environments. Another expert considered that having more than one location gave more chances to the variety to be considered distinct and that when DUS trials were made in two

locations, special care should be taken in order to avoid taking some characteristics from one location and others from the second location.

(See document TWC/18/15 Prov., paragraphs 54 and 55).

(o) Document TGP/13 "Guidance for New Types and Species"

78. The TWA considered document TGP/13(a), which was part of document TC/36/7 (pages 125 to 131). The first three chapters of this document dealt with the assessment of relative uniformity and the selection of comparable varieties. The document proposed that on the one hand, the higher the degree of uniformity for a variety the more scope there is for the development of new distinct varieties and on the other hand, very high standards of uniformity might be unattainable and prevent the development of new varieties. It concluded that the system should strive towards an optimum balance for the assessment of the uniformity criteria. When uniformity was assessed using the concept of relative tolerance the level of relative uniformity could be based upon what is known to be attainable by the breeding method used. Therefore the selection of the reference varieties was a crucial step.

79. The following chapters of the document dealt with the Guidance for New Types and Species and Reproductive Systems and Variety Types. It was explained that the first variety of a new species would mark the level of uniformity required in the future and in cases where there was no previous experience the national authorities should look for an appropriate level of uniformity, neither so high that it would become a barrier nor so low that it would prevent further breeding. The situation became more complex with the development of new breeding and multiplication techniques. Different reproductive systems and variety types were considered in the document.

80. The document was considered very useful by the experts at the TWA, because of the extension of plant breeder's rights to new species and the development of new breeding techniques. The TWA agreed to include the first three chapters in document TGP/10 "Testing Uniformity," and to leave the rest as part of document TGP/13 without changes under the title "Guidance for New Types."

(See document TWA/29/21 Prov., paragraphs 58 to 62).

(p) Document TGP/14 "Glossary of Technical, Botanical and Statistical Terms used in UPOV Documents

81. The TWA noted document TWA/29/9 "Glossary of Statistical Terms." Most experts at the TWA agreed that it was a very good document, very simple and that its approach should be kept as it was at the moment. One expert noted that several definitions widely used within UPOV, such as COYD, COYU, acceptance probability and STD population, were missing. The TWA agreed that the document should be forwarded to the TWC for final development but it recommended keeping the same approach for the document because it proved comprehensible for the crop experts.

(See document TWA/29/21 Prov., paragraphs 67 to 69).

82. The TWC noted document TWA/29/9. Most experts agreed that it was a good document and that in spite of some amendments the general approach of the document should be kept.

(See document TWC/18/15 Prov., paragraph 29).

II. MATTERS ALREADY CONSIDERED IN THE DEVELOPMENT OF DOCUMENT TC/37/5 (SEE DOCUMENT TWF/31/12, ITEM 6)

Supporting Evidence
(See document TC/37/5, Annex I, Chapter 4.6)

83. Experts at the TWA discussed the assessment of distinctness, using supporting evidence, in the case of two varieties without differences in the description and the possibility of using DNA profiles as supporting evidence. Some experts agreed that the possibility of having different varieties with similar descriptions was envisaged in the General Introduction and that DNA profiles were not yet being used as supporting evidence.

(See document TWA/29/21 Prov., paragraph 43).

84. The TWA agreed that the document TWA/29/8 could be considered as a basis for document TGP/15 "the Model System for Determining Distinctness for Homogeneous Varieties of Annual Agricultural Crops." The TWA identified that the following points should need further development: (a) to firstly consider the varieties which are largely known as having good performance in the area where the application was made, (b) the possible use of trials in two locations, (c) rejections when wrong information was provided by the applicant and d) the use of supporting evidence. The TWA will continue the discussion of models for the assessment of distinctness for other types of varieties.

(See document TWA/24/21, paragraph 44).

Disease Resistance Characteristics
(See document TC/37/5, Annex I, Chapters 4.6 and 4.7)

85. The TWV reiterated the importance of disease resistance characteristics in vegetable DUS tests, which were in many cases examined only by a limited number of member States. On the one hand, the TWV agreed to promote further harmonization of disease resistance tests by information exchange and cooperation in disease testing. On the other hand, in view of region-specific nature of many diseases and in order to avoid an excess burden on breeders for the maintenance of uniformity over disease characteristics, TWV reconfirmed that disease resistance characteristics should be non-asterisk characteristics in principle, and to establish that they could be asterisk characteristics only where neither member States nor the appropriate breeder's organizations were opposed to such characteristics.

86. It was proposed in the TWV that different levels of resistance be accepted as states for polygenic disease resistance characteristics. The TWV agreed that the different levels of resistance would be accepted only if these could be observed consistently.

(See document TWV/34/15 Prov., paragraph 15).

Functional Categories of Characteristics
(See document TC/37/5, Annex I, Chapter 4.7)

87. The TWV noted some divergence of opinion on the criteria and objectives of grouping characteristics, asterisk and non-asterisk characteristics and characteristics to be included in the Technical Questionnaire. For example, some experts insisted that those characteristics that were nationally important and useful for grouping, but might be influenced by environment, such as "Time of Harvest Maturity," could be included as grouping characteristics in UPOV Test Guidelines. Others believed that only grouping characteristics should be used to distinguish varieties from variety descriptions produced at different testing locations. Therefore, characteristics which show consistent expression at different testing locations and which have a relatively small risk of being observed differently by different testing experts should be chosen for grouping characteristics in UPOV Test Guidelines.

88. The TWV concluded that clearer criteria for different categories of characteristics would be needed in the New General Introduction.

(See document TWV/34/15 Prov., paragraphs 40 to 42).

Varieties of Common Knowledge
(See document TC/37/5, Annex I, Chapter 5.2)

89. Some experts considered that some paragraphs of document TGP/3 were more related to management of reference collection rather than the notion of varieties of common knowledge. It was also discussed whether a variety might be considered a variety of common knowledge in one country and not in another, whether living material was also a requirement for a variety to be considered as part of the common knowledge and if land races and plant varieties described in the internet should be considered varieties of common knowledge. Some experts at TWA thought that material in gene banks should be considered as part of the common knowledge.

90. The TWA concluded that the availability of living material should be a requirement if varieties were to be considered as part of common knowledge. It should be taken into consideration in the technical examination. The TWA also concluded that there were two main issues: (1) the notion of common knowledge, which was mainly a legal issue and not possible to be precisely defined, and (2) the management of reference collections, which was a technical subject to be discussed at the TWP meetings, clearly separate from the first issue.

(See document TWA/29/21 Prov., paragraphs 32 to 36).

91. Experts at the TWC considered that there were two issues involved when considering reference collections. On the one hand the reference collections, and on the other hand the notion of common knowledge.

(See document TWC/18/15 Prov., paragraph 22).

Uniformity Requirement for Characteristics Used for Distinctness
(See document TC/37/5, Annex I, Chapter 5.3.2)

92. Discussions were based on document TWA/29/15. The document examined two special situations related to the requirement of uniformity in characteristics used for DUS testing. The first one was the use of additional or new characteristics for existing variety types. Two possibilities were presented in the document for this situation: lack of uniformity in the characteristic but without overlap in its expression between the varieties in which case the varieties could be considered distinct; lack of uniformity and with overlap in the expression of the characteristics between the varieties. In this latter case, the document considered that where uniformity was assessed using the concept of off-types, distinctness should only be determined on characteristics for which there was sufficient uniformity in the varieties. Where relative tolerance limits were used for assessment of uniformity, provided that the uniformity requirement was met, distinctness could be established by different mean values. The second situation discussed in the document was the development of a suitable set of characteristics for new types and species. For this second situation it was proposed that a reasonable level of uniformity should be required in the development of a set of characteristics for a new species or type of variety but this level would vary according to whether uniformity was assessed based on the presence of off-types or on the basis of relative tolerance limits.

93. The TWC considered selection within already protected varieties. One expert suggested introducing the subject in a different way in order to avoid giving the impression that this activity was encouraged by UPOV and other expert suggested avoiding mixing the concept of essentially derived variety with DUS testing. Some experts also considered that reselection from protected varieties should be accepted provided that some changes in the genetics of the variety were done as well.

(See document TWC/18/15 Prov., paragraph 27).

Overlapping of Data Distribution.

94. The TWA considered the situation of three varieties that, for a given characteristic, which was the only difference between them, had a different average value but the tails of the data distribution overlapped. Most experts at the TWA agreed that the varieties should be considered distinct in that case. Some experts noted that this specific case could occur in allogamous crops but usually more than one difference between cultivars could be found and that the situation was, therefore, theoretical. One expert mentioned that in some cases, such as number of days to flowering stage for ryegrass, some overlapping in the distribution of the data from different varieties has been observed in his country.

(See document TWA/29/21 Prov., paragraphs 50 and 51).

The Requirement of Uniformity and the Re-selection Within Varieties

95. While some experts at the TWA considered that once a variety was declared uniform that condition did not change other experts thought that the inclusion of new characteristics had consequences in the older varieties anyway because they should be maintained according to the expression of the new characteristics for which they had not been described before. The expert from ASSINSEL at the TWA expressed the point of view of the breeders who wanted to be able to select from varieties. Other experts considered that the improvement of

existing varieties by reselection could be a useful activity but should not jeopardize existing, protected cultivars.

96. Different situations were considered at the TWA: (i) two varieties with different states of expression but the reference variety lacking in uniformity; (ii) both varieties had different states of expression of the characteristic but the reference variety was uniform and the candidate variety lacking in uniformity; (iii) both candidate and reference variety were lacking in uniformity. In none of the three cases was the same state of expression found in the candidate and the reference variety. Some experts considered that situation (i) was acceptable but not situations (ii) and (iii), while others considered that none of the three situations could be accepted because of lack of uniformity in either the reference or candidate variety. It was proposed that the whole proposal be considered as "absence or presence" of a specific state of expression. One expert said that it could be the case of resistance to a new kind of disease.

97. Another set of situations was considered by the TWA showing the same situation as the previous with respect to the uniformity of the candidate and the reference variety, but in all three situations a common state of expression occurred in the candidate and in the reference variety. Most experts agreed that none of them would be acceptable for DUS testing. Some experts proposed that paragraph 78 of the Revised General Introduction (document TC/36/8) should be deleted. Several experts wanted to know whether these were cases of new states of expression of a characteristic that already existed or new characteristics.

98. The TWA concluded to continue the discussion and that a new document would be prepared for the next meeting and to delete paragraph 78 of document TC/36/8.

(See document TWA/29/21 Prov., paragraphs 52 to 57).

99. The TWO expressed its opinion that it was impossible to stop selection from within a protected variety. It would be necessary to amend paragraphs 58, 78, 82, 86 to 95 before final clarification. The expert from Australia expressed the official point of view of that member State: "We will not accept that new varieties cannot be selected from existing (and even protected) varieties. We do acknowledge that there are specific circumstances where new varieties selected from existing varieties will not be allowed plant breeders' rights protection. However a blanket ban, as anticipated by paragraph 78 is not accepted nor is it scientifically supportable or in accordance with the Diplomatic Conference establishing UPOV in 1961." Australia reserved a right to vote on it for final approval. The TWO proposed to take out all references to it in the above mentioned paragraphs, since it was not in conflict with the notion of breeder and selection from within an existing variety, and then discuss it on the basis of opinions of other Working Parties. Only after that would the TGP document be prepared.

Examining Distinctness
(See document TC/37/5, Annex I, Chapter 5.3.3)

100. The TWA discussed a proposed process for establishing distinctness based on document TWA/29/8. Experts at the TWA discussed the possibility of taking a decision after a first growing cycle of DUS testing. Several experts supported the idea that, if there was a big difference after the first year of trial, they did not consider it necessary to include these reference varieties in trial for the following year. It also discussed the possibility of having field trials in more than one location. Different uses for the field trials in the second location were explained. Some experts considered it useful to have a back-up trial for security

reasons. The use of these trials in the second location for DUS purposes was discussed, but it was noted that certain conditions should be met, such as different environmental conditions between the locations and clear differences between the varieties in both locations. However, some experts considered that the differences between the example varieties between the locations rendered the descriptions useless. Some experts considered that the use of more locations increased the chances for approval of varieties.

101. The TWA noted a procedure, to be used only when certain conditions are met, that consisted of a first year trial made by the applicant and a second year trial made by the national authority. Several experts at the TWA agreed that, as a general approach, differences that could not be assessed in the country of application were not accepted but highlighted that this point needed further clarification (the assessment of decease resistance was mentioned as example).

(See document TWA/29/21 Prov., paragraphs 37 to 40).

Various

102. The TWO discussed documents TC/36/5, TC/36/7, TC/36/8, the Annex to Circular U 2976 and made the following remarks or came to the following conclusions:

Annex to Circular U 2976: Comments to Individual Paragraphs of TC/36/8

103. Ad. 31: The TWO disagreed with the Office of the Union's proposal. Phytoplasma was already covered by "foreign factors" and there was no need to further specify it. The TWO proposed not to mention phytoplasma at all and to have a more general wording.

104. Ad. 32: The TWO proposed to delete the whole non-numbered paragraph after paragraph 32 as both sentences were not completely correct and could be misleading. The TWO considered that experts should be referred to the complete explanations in document TGP/3.

105. Ad. 40: The TWO proposed a new wording for the paragraph: "The material to be submitted for the assessment of DUS for seed propagated varieties and especially for cross-fertilized varieties must be representative of the candidate variety as it would be marketed; that means that the material tested should be of the same generation level as that later placed on the market." The TWO proposed to delete the last sentence of paragraph 40 unless there was a valid reason to keep it as it was.

106. Ad. 54: The TWO agreed with the Office of the Union's proposal.

107. Ad. 115: The TWO wanted more clarification on that paragraph: specifically it wanted to know if fixed frequencies were considered (a) sufficiently uniform or (b) non-uniform but acceptable for certain species. If (a) was the case the paragraph was acceptable, if (b) was the case the paragraph needed re-drafting.

108. Ad. 144: The TWO proposed to change the wording to that suggested for paragraph 40.

109. The expert from France expressed his opinion that the wording of the explanation for paragraph 89 concerning ornamental varieties did not seem correct. The TWO proposed that the second sentence of the explanation should read "For vegetatively propagated and self-pollinated ornamental varieties one growing cycle may be sufficient."

Annex to Circular U 2976: Comments on Open Points of Document TC/36/8

110. Ad. 1.1: Definition of Variety and Common Knowledge: The TWO decided to discuss this later when considering the TGP/3 document.

111. Ad. 1.2: Hybrid Parentage : The TWO decided that the question was important for the TWO but for the time being the number of applications for such varieties was small. The TWO would like to participate in the preparation of documents to be sure the opinion of the TWO was taken into consideration.

112. Ad. 1.4: Reference Collection: The TWO decided that there was a different understanding of what "reference collection" meant in each given case. The expressions "Working reference collection," "World reference collection," "Crop reference collection" etc. were used by experts. The TWO proposed that the whole text of the General Introduction document should be clarified for proper use of the term. The TWO also wanted to have an input in the document TGP/4 (4.(a)(iii)) – The Management of Reference Collections in Cross-fertilized Species, because, in its current form, the TWO could not accept the document. The TWO wanted to cooperate via the Chairperson with other authors of the document in question to prepare a more appropriate version.

113. Ad. 1.5: Application of Quantitative Data: The TWO disagreed with the statement concerning ornamentals as it was expressed in the last sentence of paragraph 1.5 in the Annex to Circular U 2976. Experts in ornamental species looked at the whole plant but the decision was based on characteristics observed. The TWO reserved a right to express its view in future when it had more experience.

114. Ad. 1.6: Useful Additional Information: The TWO concluded that supporting evidence was not very often used in ornamentals. The TWO would like to have clarification on what should be discussed there.

Annex to Circular U2976: Comments on Document TC/36/5

115. The TWO decided not to make any comments on the document as it had already been discussed and would wait until other Working Parties had expressed their opinion on it.

Annex to Circular U2976: Comments on Document TC/36/7

116. The TWO decided not to discuss all the comments on that document as presented in the Annex to Circular U 2976 but to concentrate on the TGP documents which the TWO was supposed to prepare or help to prepare.

117. General Comments on TGP Documents: The TWO strongly supported the idea that TGP documents should be practical in their approach, and applicable internationally as well as for all Working Parties. It was suggested that documents of a philosophical kind should not be included in the list of TGP documents, at least at that stage of development, and that it should only contain documents at a stage to be adopted by the Committee.

118. Document TGP/3(a) (here and below as numbered in document TC/36/7): The Concept of Varieties of Common Knowledge: The TWO did not discuss this document at length as it had already done so at the previous meeting and was now waiting for the comments of the other Working Parties. However, it disagreed with the comment in the Annex to Circular U 2976 on this document. A variety might fail to be protected for a number of reasons but could still be of common knowledge if it was on the market and met the basic definition of "variety."

119. Document TGP/13(a): Relative Uniformity, Comparable Varieties and Guidance for New Types: The TWO decided that most experts did not have enough experience to contribute to a document but it would like to be involved in the preparation and development via the Chairperson.

120. Document TGP/13(b): DUS Testing of New Species: The TWO discussed the document and concluded that it was in agreement with the position in the document. Information from breeders was however rather limited and national authorities of the country indicated as country of origin should be asked for information as well. Information would still be limited. The TWO suggested deleting the wording "which are in the (national or UPOV) guideline" at the very end of paragraph 6.

121. The TWF discussed documents TC/36/5, TC/36/7, TC/36/8 and Circular U 2976, and made the following remarks or came to the following conclusions:

Annex to Circular U 2976: Comments on Individual Paragraphs of Document TC/36/8

122. Ad. 31: The TWF disagreed with the Office of the Union's proposal and proposed not to mention phytoplasma specifically as it was included in disease.

123. Ad. 32: The TWF proposed to delete the whole non-numbered paragraph after paragraph 32 as both sentences of the non-numbered paragraph were not quite correct and could be misleading.

124. Ad. 40: The TWF agreed with the Office of the Union's proposal.

125. Ad. 54: The TWF agreed with the Office of the Union's proposal.

126. Ad. 115: The TWF agreed with the Office of the Union's proposal.

127. Ad. 144: The TWF agreed with the Office of the Union's proposal.

128. The TWF proposed to put the text of Explanation (i), paragraph 144, as a continuation of paragraph 142. This text is very important, especially for new member States, and should remain in the General Introduction as all explanations would be deleted.

Annex to Circular U 2976: Comments on Open Points of Document TC/36/8

129. Ad. 1.4: Reference Collection: The expert from the United Kingdom volunteered to prepare a short document with explanations on what was meant by Reference Collection in the different contexts.

130. Ad. 1.5: Application of Quantitative Data: The TWF totally disagreed with the last sentence of paragraph 1.5 in the Annex to Circular U 2976, where fruit species testing was mentioned as a "whole plant" approach rather than characteristic by characteristic.

Annex to Circular U 2976: Comments on Document TC/36/5

131. The TWF decided not to make any comments on the document as it had been prepared by the TWF. Some input from the TWV was still expected. Experts from South Africa and the United Kingdom would prepare a document with the list of terms which still needed to be harmonized. Comments on document TC/36/5 contained in the Annex to Circular U 2976 would be included by the experts from South Africa and the United Kingdom in a new draft.

Annex to Circular U 2976: Comments on Document TC/36/7

132. The TWF decided not to discuss all the comments as presented in the Annex to Circular U 2976 but to concentrate on the TGP documents which the TWF was supposed to prepare or cooperate in preparing.

133. TGP/3(a) (here and below: as numbered in document TC/36/7) "The Concept of Varieties of Common Knowledge": The TWF disagreed with the comment on this document as in the Annex to Circular U 2976, concerning paragraph 5 (b). A variety might fail to be accepted for protection for a number of reasons, for example because of novelty criteria but it still could be marketed and thus far it was still a variety. The TWF disagreed with the comment on paragraph 5 (e) because an old variety could be re-entered but had to be rejected, although it would still be kept as a variety of common knowledge.

134. TGP/13(b) DUS Testing of New Species: The TWF decided to ask for more clarification on page 132, paragraph 1, and for page 133, paragraph 5, before commenting.

135. The TWC made the following comments to document TC/36/8:

p. 66 To insert "For more information about characteristics and their scale levels see TGP/8."

p. 67 Replace the example by "sex of plant."

p. 70 To be deleted.

p. 71 To read "Provided that the combination is biologically meaningful, characteristics that are assessed separately may subsequently be combined, for example the ratio of length to width. Combined characteristics are treated in the same way as other characteristics."

p. 100 To make reference to document TGP/7 only.

p. 112 To read "Cases can arise in which differences between two varieties may be observed in several separately assessed characteristics. They may subsequently be combined, provided that the combination is biologically meaningful, for example the ratio of length to width. Combined characteristics are treated in the same way as other characteristics."

p. 123 To make the reference to Chapter 6.5.2 instead of Chapter 6.5.2.1.

III. MATTERS FOR INFORMATION ONLY

Cooperation with the Tropical Fruit Network (TFNet)

136. The TWF discussed the proposal from the Tropical Fruit Network (TFNet), an independent global network set up under the auspices of FAO, for a collaborative program. The TFNet had been set up for the promotion of production, processing, marketing, consumption and international trade in respect of tropical fruits. It was both intergovernmental and inter-institutional in nature and reported its activities to the Subgroup on Tropical Fruits of the FAO Intergovernmental Group on Bananas and on Tropical Fruits. Countries of tropical regions could use only a few UPOV Test Guidelines (e.g. Banana, Guava, Watermelon, Citrus, Mango). A lot of crops needed Test Guidelines to be prepared for fruits such as Rambutan, Durian, Mangosteen, Jackfruit, etc. The TWF found the proposal for cooperation useful and decided that Japan would take a lead together with South Africa and Mexico and would suggest that the TFNet participate in the preparation of Test Guidelines for tropical fruits, starting with Mango.

(See document TWF/31/12, paragraph 12).

Use of Test Guidelines Characteristics in Apple

137. The TWF discussed document TWF/31/2, Circular U 2874 and documents distributed at the session by experts from Japan and the United Kingdom. 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 non-asterisk characteristics had been selected and which additional characteristics had been used, the TWF at its thirtieth session in Nitra, Slovakia, agreed to select the species Apple and to ask all member States to submit to the Office of the Union the list of characteristics they actually used for the testing, including characteristics needed only once or a few times in special cases. After discussion of the documents, the TWF concluded that the majority of the Offices used the complete list of characteristics regardless of whether those characteristics were marked with asterisks or not, and in some cases special technology, enhancement of characteristics or additional characteristics were used.

(See document TWF/31/12, paragraph 13).

Possible Future Roles for Molecular Techniques

138. Discussions were based on document TWA/29/11, prepared by Mr. Michael Camlin (United Kingdom). The document included mainly personal opinion of its author. The document considered that rapid advances were taking place in genetic studies across the plant sciences and biochemical and molecular methods were available for the identification and description of plant genotypes and cultivars in a number of crops. However, it considered that the identification of natural genotypes or of existing cultivars was rather different from the *de novo* registration and granting of plant breeders' rights to a new cultivar and that there were important issues to be considered. It recalled that, at present, the basis for most technical

examinations for the grant of a breeder's right usually involved a growing test to determine the morphology of the component plants of a new candidate cultivar, in comparison with appropriate reference cultivars, to establish its distinctness, uniformity and stability (DUS). For some crops, where there had been problems in determining distinctness using routine morphological characteristics, the use of biochemical characteristics, examined by electrophoresis, had become acceptable for providing supporting evidence of distinctness, provided the normal uniformity standards were met and there was a good understanding of the genetics involved. It mentioned that the potential for molecular techniques had not been fully explored and their use was still under discussion. Therefore, they had not yet been recommended for determining the distinctness of new cultivars, although, in the consideration of essential derivation especially, it was recognized that they were likely to play an important future role in the determination of genetic distance. It was proposed that differences should not be reduced to a few nucleotide base-pairs and concluded that the principles of genetic interpretation of the differences between cultivars and an understanding of the functional role of phenotypic expression of these differences was also important and that molecular techniques satisfying those principles should have a significant future role to play in plant variety protection.

139. The expert from ASSINSEL recalled that ASSINSEL considered that DUS testing should continue to be based on phenotypic characteristics, that electrophoretic characteristics must not be used alone for establishing distinctness but only as additional evidence for distinctness and that they must not be used at all for populations and synthetic varieties of cross-pollinating species. The document was considered very useful for a lot of experts at the TWA. Some experts considered that these techniques might have a role in the assessment of distinctness and essential derivation but special care should be taken in its use to keep the value of the plant breeders' rights system. The TWA requested the Office of the Union to circulate the document among the other Working Parties for comments from experts.

(See document TWA/29/21 Prov., paragraphs 70 to 74).

Population Standard in Hybrids of Out-Breeding Species

140. The TWC discussed the procedure for the assessment of uniformity by fixing a population standard for off-types to hybrids of out-breeding species stated in UPOV document TG/1/2, which was under revision at that moment. In document TWC/18/12 it was proposed that the assessment of uniformity should be based on relative tolerance limits based on hybrids of similar genetic make-up, rather than using a fixed population standard,. The TWC noted that this proposal had already been considered under the revision of document TG/1/2 (see document TC/36/8, paragraph 140). Most experts at the TWC agreed to the method that was defined in paragraph 140 of document TC/36/8. One expert mentioned that for vegetable varieties the parental lines were not tested therefore it was not easy to know whether the variety under test was a hybrid or not while another expert considered very difficult to work without knowing whether the variety was a hybrid or not.

(See document TWC/18/15 Prov., paragraphs 49 and 50).

Telecommunications, Exchangeable Software and Contacts

141. The TWC noted document TWC/18/11 on telecommunications, exchangeable software and contacts. The document is an update of the previous documents TWC/17/4 and

TWC/17/7. It contained information downloaded from the Web site http://www.bioss.sari.ac.uk/upov: an e-mail list of participants in the different UPOV TWPs, exchangeable software used by member States, database management systems in use, a COYD on line demonstration and an index of TWC papers from 1986 to 1999. The document also contained the links from the UPOV Web page, the e-mail address list, and the JAVA version of the COYD program, which allows an exploration of COYD on line.

142. Experts from the United Kingdom wondered about continuing with the e-mail bulletin board. At that moment, there were 37 members registered, 13 related to UPOV and very few messages had been received. They said that they would continue hosting the electronic e-mail board for one year, but they considered that with the development of the Web page from the Office of the Union it would be better if UPOV could host it. Some experts at the TWC supported the idea that the Office of the Union could host it as it could also do the same for other TWPs.

(See document TWC/18/15 Prov., paragraphs 56 and 57).

Developments in DUST for Windows

143. The TWC noted document TWC/18/13 introduced by the expert from the United Kingdom. The most important developments were an expansion of the main module for COYD, modification of the module DUS69, which now can be used to compare two specific varieties within a year or over years and it was also able to work with “cyclic control” type data or “complete controls” type data. Finally, improvements in the selection of similar varieties to the candidate one by means of a filter file were mentioned.

(See document TWC/18/15 Prov., paragraph 58).

Workshop report

144. Mr. Kristian Kristensen (Denmark), coordinator of the Workshop on Data Handling that took place on June 9 and 10, 2000, in Kyiv, gave a brief report on that activity at the TWC. He thanked the lecturers for their participation and mentioned that thirty-one participants from seventeen different countries had attended the Workshop. The main objective was to introduce the main statistical principles used in DUS testing and to give some expertise in the use of the COY program. He recommended repeating the activity in the future.

(See document TWC/18/15 Prov., paragraphs 59 and 60).

[End of document]