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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

COUNCIL**Thirty-Fourth Ordinary Session
Geneva, October 26, 2000****PROGRESS REPORT ON THE WORK OF THE TECHNICAL COMMITTEE,
THE TECHNICAL WORKING PARTIES AND THE WORKING GROUP
ON BIOCHEMICAL AND MOLECULAR TECHNIQUES
AND DNA-PROFILING IN PARTICULAR***Document prepared by the Office of the Union***TECHNICAL COMMITTEE**

1. The Technical Committee (hereinafter referred to as "the Committee") held its thirty-sixth session in Geneva from April 3 to 5, 2000. The detailed report on the Committee's session appears in document TC/36/10 Prov.
2. The main results achieved by the Committee during that session are set forth below:

General

3. It noted the usual reports on the progress of the work of the Technical Working Parties and approved their programs for the coming year.
4. It endeavored to answer the various questions that the individual Technical Working Parties had submitted to it as reproduced in document TC/36/3.

5. It welcomed the annual updating of document TC/36/4 on species on which practical knowledge has been acquired.

Test Guidelines

6. During the session, the Committee adopted the following Test Guidelines after having agreed on changes proposed orally by the Editorial Committee:

TG/15/2(proj.): Pear/Poirier/Birne/Peral

TG/77/8(proj.): Gerbera/Gerbera/Gerbera/Gerbera

TG/81/5(proj.): Sunflower/Tournesol/Sonnenblume/Girasol

TG/173/2(proj.): Witloof, Chicory/Chicorée, Endive/Zichorie/Endivia

TG/174/2(proj.): Iris (bulbous)/Iris (bulbeux)/Iris (zwiebelbildende)/Lirio (bulboso)

TG/175/2(proj.): Kangaroo Paw/Anigosanthe de Mangles/Kängurublume/
Anigozanthos

TG/176/2(proj.): Osteospermum/Osteospermum/Osteospermum/Osteospermum

General Introduction to Test Guidelines

7. The Committee discussed the Revision of the General Introduction to Test Guidelines (TG/1/2) and noted the documents TC/36/5, TC/36/6 and TC/36/7. The Committee decided that the Enlarged Editorial Committee should discuss the documents in detail and send the outcome to all the Technical Working Parties and also to the Administrative and Legal Committee of UPOV for discussion during year 2000.

UPOV-ROM

8. The Committee noted the full acceptance by the Technical Working Parties of the inclusion of technical information in the UPOV-ROM. It agreed to include the information of item 5 of the Technical Questionnaire of the Test Guidelines and to take actions to include the UPOV Taxon Code as well. It requested the participants to send comments for the improvement of the UPOV-ROM.

Supporting evidence

9. The Committee discussed the possible use of supporting evidence for the assessment of DUS. It considered that it could be used only if the expert was convinced and if clear rules were established. The Committee also heard the position of ASSINSEL against the use of supporting evidence in cross-fertilized crops. The Vice Secretary-General suggested that, from a legal point of view, it was not acceptable to consider the supporting evidence as something different from a DUS characteristic, where the proof of Distinctness is based on supporting evidence.

Consequences of the introduction of new characteristics in already existing varieties

10. The Committee discussed the consequences of the consideration of new characteristics in already existing varieties, which may not be uniform for that new feature. Several points were considered: the possibility of plagiarism; that both new and already existing varieties should be uniform for the characteristics used for DUS; that a longer list of characteristics could be a burden for the maintenance of the variety; that further breeding from already existing varieties should not be forbidden. These subjects would also be discussed during the coming meetings of the Technical Working Parties.

Management of reference collections

11. The Committee noted that the UPOV Convention requires consideration of DUS assessment on a worldwide basis. It was aware of the importance of an appropriate reference collection of varieties and of developing tools and procedures that allow selection of the closest varieties to the candidate with reasonable confidence. The Committee and the Technical Working Parties will continue discussing this issue as part of the Complementary Documents (TGP/4 and TGP/12) for the New General Introduction to Test Guidelines.

Example varieties

12. The Committee noted that, with an increasing number of member States in UPOV, the difficulty in reaching universal agreement on the example varieties in the Test Guidelines has increased. The Committee requested the Technical Working Parties to discuss a paper prepared by the expert from France and to continue discussing this issue at the next session.

DUS testing in hybrid varieties

13. The Committee discussed the possibility of using the parental formula for hybrid DUS tests and noted that there already is an agreed position on that in some TG documents. It also noted the comment from the Vice Secretary-General that the UPOV Convention provides special treatment for hybrids in the definitions of Stability and that access to parental lines is necessary when protecting hybrids.

Duration of DUS Tests, early decision

14. The Committee discussed the possibility of making decisions using information from more than one location to shorten the period of testing. It concluded that it should be open to such shortening of the DUS testing period, but clear rules should be set up to guarantee the security of the results.

Testing seed propagated varieties of ornamental species

15. The Committee noted the discussions at the TWO and a meeting with crop experts and ASSINSEL on the DUS assessment of seed propagated varieties of ornamental species. It

requested the TWO to continue the discussion on that issue and to provide further information.

Documents in electronic format

16. The Committee welcomed the creation of additional pages in the UPOV Web site containing documents in electronic format and their advance submission by electronic mail and proposed to continue with this development.

Possible use of molecular techniques for DUS testing

17. The Committee was informed of the main issues discussed in the sixth BMT Meeting and approved the proposal of creating *Ad hoc* subgroups for the following species: Wheat, Oilseed Rape, Tomato, Maize and Rose.

Program for the thirty-seventh session of the Committee

18. The thirty-seventh session of the Committee is to take place in Geneva from April 2 to 4, 2001. It is planned that the following items will be discussed during the session: progress reports and questions presented by the Technical Working Parties, revision of the General Introduction to Test Guidelines, reports from the *Ad hoc* advisory group on the possible use of molecular techniques for DUS testing. In addition, the Committee will take decisions on the Test Guidelines to be submitted by the Technical Working Parties for final adoption.

PROGRESS REPORT ON THE WORK OF THE TECHNICAL WORKING PARTIES

General

19. All Technical Working Parties welcomed the developments in the UPOV Web site and the advance submission of documents in electronic format and encouraged the Office of UPOV to continue this practice.

Progress Report on the Work of the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT)

20. The Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT) held its sixth session at Angers, France, from March 1 to 3, 2000, under the chairmanship of Mr. Michael Camlin (United Kingdom). The draft report on the session will be reproduced in document BMT/6/13 Prov. The business of the session is described below.

Assessment of Uniformity

21. The BMT heard results of the assessment of variability within varieties and between varieties in Sugar Beet, Wheat, Oilseed Rape, and Maize. It learned from the studies in inbred lines of Oilseed that the assessment of uniformity by molecular data could be consistent with assessment by phenotypic characteristics in some species with certain marker sets. With respect to the problem that the observed level of uniformity could differ according to the choice of markers, it discussed the proposed approach of choosing marker sets that are not only usefully polymorphic, but also sufficiently uniform within existing varieties. It reaffirmed that approaches and standards for the assessment of uniformity would differ, depending on the mode of propagation of varieties, molecular techniques and molecular markers.

22. However, a majority of experts in the BMT expressed optimistic views concerning technical feasibility of uniformity assessment by molecular data. Once approaches to the assessment of distinctness were determined, assessment method for uniformity could possibly be decided without technical difficulties. The BMT also discussed the role of uniformity criteria in DUS testing. Several experts stated that a uniformity criterion was not as important as distinctness. The BMT agreed that priority should be hereafter given to the discussion as to how to assess distinctness. The assessment of uniformity could not be discussed without fixing the assessment of distinctness. The BMT also discussed whether molecular marker sets should or could be standardized in cases where they were to be used for DUS testing.

Phenotype and Genotype

23. The interpretation of “the expression of the characteristics resulting from a given genotype or combination of genotype” is split into two positions. Some experts insisted that the wording implied “phenotype.” Therefore, differences in molecular markers possibly resulting from differences in non-coding parts of DNA could not alone establish distinctness. However, the Vice Secretary-General of UPOV reported the view expressed by the CAJ that these words do not necessarily mean “phenotype”. The 1991 Act does not require or forbid the use of molecular markers. The decision on the use of molecular markers for the assessment of distinctness should be based upon the views of technical circles who were not circumscribed by the language of the Convention.

Minimum distance and clear distinctness

24. With respect to the concept of minimum distance, the BMT noted two different views. One view was that the concept of the minimum distance had reduced in significance after the adoption of the 1991 Act and the introduction of essential derivation concept. In practice, the minimum distance had been very small in some cases, such as single-gene controlled characteristics: disease resistance and flower color. Another view was that the concept of the minimum distance should be maintained to ensure the quality of protection. All small differences, such as one band difference in DNA profiling, should not always be regarded as “clearly distinguishable”. The BMT also heard a proposal for investigating new assessment approach: distinctness would be assessed by the distance between varieties derived from the totality of all characteristics, instead of in a characteristic-by-characteristic basis.

Supporting evidence

25. The BMT discussed the introduction of molecular characteristics as supporting evidence. It heard a proposal for the use of molecular characteristics for supporting differences observed in the field, especially in performance characteristics, on judging distinctness. Some experts doubted the legal status of supporting evidence characteristics, which might function as last resort characteristics. Others stated that the status was clearly different from normal characteristics because the use of supporting evidence characteristics is limited to cases where testing experts are strongly convinced of the distinctness of varieties by the results in the field trial.

Possible consequences of introducing molecular markers for DUS testing.

26. The BMT also noted other important concerns that should be taken into account in case of introducing molecular characteristics. The introduction of molecular markers might result in significant changes in the protection system. In this case, there would be the need for special care during a transitional period to protect the rights granted by the present system. Another concern was stability criteria for molecular characteristics, which might result in an extra burden for breeders/maintainers. It was proposed to discuss a wider threshold for stability in molecular characteristics, taking into account its possible impacts on the maintenance practices of breeders.

Statistical treatment of molecular data

27. The BMT heard several presentations on statistical analysis and a brief report from the Chairman of the TWC. It noted again that the lack of assimilated data of a good quality was still the main obstacle to further studies.

Management of reference collections: identification of similar varieties

28. The BMT heard results of the study of Chrysanthemums for identifying most similar varieties and a proposal for the management of reference collections, including the use of molecular data. It noted that one of the key problems for the use of molecular techniques might be still the lack of good correlation between phenotypic distance and molecular distance

Assessment of essential derivation

29. The BMT discussed the use of molecular techniques for the judgement of essential derivation, following a presentation on the assessment of genetic conformity between Ryegrass varieties. It reconfirmed that the judgement of essential derivation would not be based only on characteristics used for distinctness. In addition, genetic conformity was not the only criterion for the judgment of distinctness.

Possible future uses of molecular techniques in DUS testing: Ad hoc subgroups

30. The BMT heard several short presentations on molecular techniques. In particular, it noted that the standardization of molecular marker sets was in progress in an EU project for wheat and tomato, and that the project would eventually test 500 varieties and construct a database. The BMT noted that molecular techniques were entering into a new phase, the phase of application in practice. In view of this situation, the BMT discussed problems associated with the access and sharing of DNA profile data and the construction of databases. The BMT realized that the access to DNA profiles, which were currently collected in isolation by different institutes, would become an issue for further studies and the further application of molecular techniques. Several experts expected that UPOV should take the initiative in constructing a central database or in establishing the framework of sharing data. The BMT also discussed the need for a database of phenotypic variety descriptions and the question concerning the ownership of variety description.

31. The BMT discussed how to achieve further progress on the discussion. It agreed to leave several fundamental questions to the TC, the CAJ or/and a special separate working group. It also decided to propose establishing *ad hoc* crop subgroups during the eighteen month interval until the next session to make real progress in discussions on possibilities and consequences of the introduction of molecular techniques in DUS testing, the management of reference collection and the judgment of essential derivation. Considering the importance of the involvement of each Technical Working Party (future user of molecular techniques), it decided to choose chairmen of the subgroups from the Technical Working Party in question. The BMT decided to establish the *ad hoc* subgroups for Oilseed Rape, Wheat, Maize, Tomato and Rose.

Future program

32. The experts from Germany offered to host the seventh session. The BMT accepted that offer and agreed to hold its seventh session in Hanover, Germany, in the middle of October 2001. During the next session, the BMT planned to discuss the following items: (i) Reports on the discussion in the Technical Committee and the Administrative and Legal Committee; (ii) Short presentation on biochemical and molecular techniques: new techniques, advantages and limits of different techniques; (iii) Possibilities and consequences of the introduction of DNA profiling methods in DUS testing (reports from *ad hoc* crop subgroups): (a) Assessment of distinctness, uniformity and stability; (b) Management of reference collection; (c) Essential derivation; (iv) Assessment of variability within varieties and between varieties; (v) Construction and standardization of databases of DNA profiles of varieties; (vi) Statistical methods: (a) Combination of information from diverse data types (AFLP, SSR, morphological data, etc.); (b) Comparison of genetic distances with phenotypic distances; (c) Confidence intervals and improvement of precision of distance estimates; (vii) The use of DNA profiling as a possible tool for management of reference collections in DUS testing; (viii) The use of DNA profiling methods in examining essential derivation.

Progress Report on the Work of the Technical Working Party on Automation and Computer Programs (TWC)

33. The Technical Working Party on Automation and Computer Programs held its eighteenth session in Kyiv, from June 12 to 15, 2000, under the chairmanship of Mr. Wieslaw

Pilarczyk (Poland) and the Workshop on Data Handling in the same place on June 9 and 10, 2000. The draft report of that session will appear in document TWC/18/15 Prov.

General Introduction to DUS testing

34. The TWC discussed the Revision of the General Introduction to DUS testing and proposed some changes. It also discussed the TGP documents specially addressed to the TWC. It agreed that the background material used for the Workshop on Data Handling would be the basis for TGP/8.

Types of characteristics and their scale levels

35. The TWC discussed the relationship between the different types of characteristics, the types of data and the type of scale used for the assessment of DUS on the basis of document TWC/19/9 prepared by the expert from Germany. The TWC agreed that, after making some changes, the document could be included in TGP/7.

Incomplete block design

36. The TWC studied several documents showing the potential use of enhanced designs analyses for field DUS trials. It will continue exploring their possible use and comments and information about their use will be welcomed by the TWC.

The COYD and COYU analysis

37. The TWC was informed about the last updates of the DUSTNT program developed by experts from the United Kingdom. The Working Party also discussed the possibility of the use of the COY approach with data from more than one location. The TWC considered that more information should be available for a final decision which in principle would be possible but should take into account the difference between locations and the consistency of the data.

The use of more than one location

38. The TWC discussed document TWC/18/2, prepared by the expert from France. The Working Party concluded that using information from more than one location may lead to a decrease in the stringency of the test. Nevertheless several countries have filed trials in more than one location but use only the data from one for DUS purposes.

Glossary of statistical terms

39. The TWC discussed and noted TWA/29/9 prepared by the expert from Australia. It welcomed the document and comments would be sent to the expert who prepared it.

Future role of molecular markers

40. The TWC noted the proposal of the TC to form subgroups for the discussion of the possible use of molecular techniques for DUS. It also heard the comments on the last BMT meeting from the former TWC Chairman. The Working Party concluded that it wanted to be informed on the outcome of these subgroups.

Telecommunications, exchangeable software and development in the www Web

41. The TWC noted the updated information on telecommunications, exchangeable software and developments in the www Web. The expert from the United Kingdom also informed the Working Party that they will host the TWC Web page for one year more but no longer, and he suggested that the UPOV Web could host it afterwards. The TWC also agreed that the UPOV Web is the correct way to host the e-mail bulletin boards proposed by the TC.

Report on Workshop on Data Handling

42. The TWC heard a report from the expert from Denmark, coordinator of the Workshop. A total of 31 participants from 16 member States and 3 Observer States attended the Workshop which showed the interest in this activity. The Working Party concluded that it was a successful activity and would be worthwhile repeating in another region.

Future program

43. The nineteenth session of the TWC will be held in Prague, from June 4 to 7, 2001. At that session, the TWC plans to discuss the new General Introduction and TGP documents, spatial dependency and plant resources, long term alpha design on sugar beet, incomplete block design, report on the subgroups on molecular markers, telecommunications, exchangeable software and development in the www Web, further developments in DUST special tests, uniformity assessment in bulk samples, first year in cycling control trials and a review of the multivariate approach for the assessment of distinctness and uniformity.

Progress Report on the Work of the Technical Working Party for Agricultural Crops (TWA)

44. The Technical Working Party for Agricultural Crops held its twenty-ninth session in Uppsala, Sweden, from June 27 to 30, 2000, under the chairmanship of Mrs. Françoise Blouet (France) and the Subgroup meeting on Sugar Cane in the same place on June 26, 2000. A total of 45 participants attended from 23 member States, 4 observer States, one observer Intergovernmental Organization and one observer International Organization. It clearly showed the interest to participate of experts from new UPOV member States. It is expected that the meeting will have a larger attendance in the future. The draft report of the session is being prepared as document TWA/29/21 Prov.

Discussions on Test Guidelines

45. During its session, the TWA completed discussions on the draft Test Guidelines for Rescue Grass, Alaska Brome-Grass, *Bromus*, Cotton, Fodder Radish, Red Clover, Subterranean Clover, Swede and White Mustard to be presented to the Technical Committee for adoption. The TWA also discussed, and completed for submission to the professional organizations for comments, draft Test Guidelines for Cocksfoot, Field Bean, Lotus, Sugar Cane, Turnip Rape, Meadow Fescue - Tall Fescue. With regard to the Test Guidelines for Rice, it noted the contributions from Asian countries and the Working Party agreed to have a new subgroup to discuss it. It also discussed the Working Paper on the Test Guidelines for Tobacco.

General Introduction to DUS testing

46. Discussions were based on document TC/36/8. The TWA agreed with the document in general. It also agreed with the proposal of the TWC to modify the wording of paragraph 112 related to the definition of “combined characteristics”, and also agreed to modify paragraph 78, to allow the selection of varieties within already protected varieties, which would not be allowed according to the present wording of that paragraph.

Common Knowledge

47. The TWA discussed the concept of varieties of common knowledge. It concluded that plant material should be available from any variety to be considered a part of the common knowledge. It also agreed that the concept of variety of common knowledge is more a legal issue and therefore should be discussed at the CAJ. The TWA considered that the Working Parties should focus more on the notion of Reference Collection rather than on the concept of common knowledge, because that is the technical and practical approach to DUS testing.

Model system for determining distinctness

48. The TWA discussed document TWA/29/8 prepared by experts from France informing on the system for determining distinctness for uniform varieties of annual crops. It agreed that, highlighting some points on which more discussion is still necessary (testing in more than one location, using of breeders' information, one year testing), the document could form part of TGP/15.

Questionnaire on Reference Collection

49. The TWA discussed the questionnaire on reference collection prepared by the experts from Denmark. TWA concluded that there were differences in the reference collections of different countries, that none of those countries answering the questionnaire systematically included varieties of other countries or regions and that it was necessary to explore possibilities to improve this situation.

Introduction of new characteristics, selection in already protected varieties

50. The TWA discussed document TWA/29/15, prepared by the expert from the United Kingdom. The Working Party agreed that, according to discussion during the last TC Session, the selection from already protected varieties should not be forbidden, and that the references to the concept of essentially derived varieties should be deleted. It also agreed to modify paragraph 78 of the General Introduction accordingly.

Breeder's testing

51. The TWA discussed the document TGP/6 prepared by the expert from Australia. The Working Party agreed that the Office of UPOV would prepare a questionnaire on breeder's testing to get updated information and would prepare a document with the result, with the prior authorization of the TC. The expert from Australia would also prepare a new document describing the Australian system.

Glossary of statistical terms

52. The TWA discussed document TWA/29/9 prepared by the expert from Australia. It welcomed the document and agreed that it is a good document. Nevertheless the TWA agreed to forward it to the TWC.

Future role of molecular markers

53. The TWA discussed document TWA/29/11, prepared by an expert from the United Kingdom about "Possible future roles of molecular techniques in the identification and registration of new plant cultivars". The Working Party agreed to circulate the document among the other Technical Working Parties for comment and would continue to discuss on the issue.

54. In response to the request of the TC concerning the selection of chairpersons for the subgroups, the TWA selected as follows:

Subgroup on Oil Seed Rape: Mrs. Françoise Blouet (France)
Subgroup on Wheat: Mr. Peter Button (United Kingdom)
Subgroup on Maize: Mrs. Beate Rucker (Germany)

Example varieties

55. The TWA discussed the importance of studying a new approach when selecting example varieties for the preparation of UPOV Tests Guidelines. The discussion was based on a document prepared by France at the TC session in April 2000. It agreed that the availability of example varieties was sometimes a problem and also discussed the possibility of including them in an annex to the Test Guidelines, which would allow revision without having to revise the whole document. The expert from France would collect comments and prepare a new document for the next TWA meeting.

Future Program

56. The thirtieth session of the TWA will be held in Texcoco, Mexico, from September 3 to 7, 2001. At that session, the TWA plans to discuss final drafts Test Guidelines for Cocksfoot, Field Bean, Lotus, Sugar Cane, Turnip Rape, Meadow Fescue - Tall Fescue and Working Papers on Test Guidelines for Potato, White Clover, Lupin and Oil Seed Rape. In addition to Test Guidelines, discussions are planned on the new General Introduction and TGP documents, the management of reference collections, the process for establishing distinctness, the possible use of molecular markers, the introduction of new characteristics and the development of characteristics for new species, breeder's testing and matters arising from the session of the Technical Committee.

Progress Report on the Work of the Technical Working Party for Ornamental Plants and Forest Trees (TWO)

57. The Technical Working Party for Ornamental Plants and Forest Trees (TWO) held its thirty-third session in Budapest, Hungary, from June 26 to 30, 2000, under the chairmanship of Miss Elizabeth Scott (United Kingdom). The full report is reproduced in document TWO/33/17 Prov.

Discussions on Test Guidelines

58. During the session, the TWO completed the Test Guidelines for *Calluna* (Revision), *Guzmania*, *Amaryllis* and *Zantedeschia* prior to their submission to the Committee for final adoption. It also completed Test Guidelines for *Celosia*, *Lavandula*, *Ornamental Apple* (Revision), *Pentas*, and *Thyme* (awaiting the decision of the TWV), prior to their submission to the professional organizations for comments. It furthermore discussed or rediscussed working papers on Test Guidelines for *Bracteantha*, *Chrysanthemum* (Revision), *Clematis*, *Eustoma*, *Impatiens*, *Leptospermum*, *Poinsettia* (Revision), *Tagetes*, *Waxflower*.

Future role of molecular markers

59. It discussed the proposal of the Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular (BMT), approved by the Technical Committee, to establish *ad hoc* crop subgroups on molecular techniques for each of the five selected crops, where Rose species had been selected for the TWO. It agreed with the proposal and nominated Mr. Joost Barendrecht (Netherlands) as Chairman of the Subgroup for Rose species.

Seed propagated varieties of ornamental crops

60. It noted and discussed the document prepared by the Chairperson as a summary of the meeting with ASSINSEL and a group of crop experts on the testing of seed raised ornamentals. It decided that this problem needed further discussion and development for the improvement of the current situation as breeders of such varieties were not very familiar with the working of the DUS-trials system. It summarized that the meeting with ASSINSEL and

further discussion by the Working Party had been very useful in clarifying a number of issues and establishing channels of communication for the discussion of technical matters.

General Introduction to DUS testing

61. It discussed documents TC/36/5, TC/36/7, TC/36/8 and U2976 for the preparation of a new General Introduction to Test Guidelines and complementary documents and made some proposals. It also expressed its opinion on some general points to change in the present text and complementary documents. A number of experts volunteered to participate in the preparation of complementary documents mentioned in the Annex of TC/36/8 for further discussion during the meeting of the Working Party.

Future program

62. The thirty-fourth session of the TWO is scheduled to be held in Japan, from September 24 to 28, 2001. At that session, the TWO plans to complete the Test Guidelines for *Celosia*, *Lavandula*, Ornamental Apple (Revision), Pentas, and Thyme (awaiting the decision of the TWV), for submission to the Committee for final adoption. It will also discuss or rediscuss Test Guidelines for *Brachycome*, *Bracteantha*, *Chrysanthemum* (Revision), *Clematis*, *Dahlia*, *Dendrobium*, *Eustoma*, *Impatiens*, *Leptospermum*, *Nerium*, New Guinea *Impatiens* (Revision), *Petunia*, *Phalaenopsis*, *Poinsettia* (Revision), Rose (cut flower only), *Salix* (Revision), *Tagetes*, Waxflower. Discussion of the following items is also planned: short reports on special developments in plant variety protection in ornamental plants and forest trees; photodata project; important decisions taken during the last session of the Working Party and the Committee; complementary documents for the General Introduction.

Progress Report on the Work of the Technical Working Party for Fruit Crops (TWF)

63. The Technical Working Party for Fruit Crops (TWF) held its thirty-first session in Budapest, Hungary, from July 3 to 7, 2000, under the chairmanship of Mr. József Harsányi (Hungary). The full report is reproduced in document TWF/31/12 Prov.

Discussions on Test Guidelines

64. At the session, the TWF completed the Test Guidelines for *Actinidia* (Revision) prior to its submission to the Technical Committee for final adoption. It also completed Test Guidelines for European Plum (Revision) and *Prunus* Rootstocks, prior to their submission to the professional organizations for comments. It furthermore discussed or rediscussed working papers on Test Guidelines for Apricot (Revision), Citrus (Revision), Prickly Pear (*Opuntia*), Persimmon (Revision), Quince (Revision), Raspberry (Revision) and suggestions for revision of Test Guidelines for Avocado and Mango.

Number of plants required

65. It discussed a document prepared by the Chairman on the number of plants required in the TG documents. It was concluded that the minimum number of plants should be

mentioned in the Test Guidelines, and that the national authorities could ask for additional material if necessary.

Crop inventory

66. It discussed the document for crop inventory on characteristics used at present for DUS testing in Apple prepared by the Office of UPOV on the basis of information submitted by member States. It was concluded that the majority of the Offices used all UPOV Test Guidelines characteristics.

Future role of molecular markers

67. It discussed the proposal of the Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular (BMT), approved by the Technical Committee, to establish *ad hoc* crop subgroups on molecular techniques for each of the five selected crops. The Working Party expressed its interest in being included in this activity with other Working Parties. It decided to ask the Technical Committee to include Peach specie in the list of selected crops for *ad hoc* crop subgroups.

Possible cooperation with the TFNet

68. It discussed the proposal of the Tropical Fruit Network (TFNet), an independent global network set up under the auspices of FAO for a collaborative program, and found the proposal useful. It would suggest the TFNet to participate in the preparation of Test Guidelines for tropical fruits and to start with Mango.

General Introduction to DUS testing

69. It discussed documents TC/36/5, TC/36/7, TC/36/8 and U2976 for the preparation of a new General Introduction to Test Guidelines and complementary documents and made some proposals. It also expressed its opinion on some general points to change in the present text and complementary documents. A number of experts volunteered to participate in the preparation of the complementary documents mentioned in the Annex of TC/36/8 for further discussion during the meeting of the Working Party.

Procedure for the adoption of Test Guidelines documents

70. It made a proposal for the Technical Committee to improve the practice for preparing Test Guidelines where the stage of submission of the draft of new TG's to the professional organizations for comments should be done in parallel with the submission of the TG's to the Committee for final adoption, subject to no major comments from the professional organizations.

Future program

71. The thirty-second session of the TWF is scheduled to be held in Valencia, Spain, from October 1 to 5, 2001. At that session, the TWF plans to complete discussions on Test Guidelines for European Plum (Revision) and *Prunus* Rootstocks for presentation to the Committee for final adoption. It plans moreover to discuss or rediscuss working papers on Test Guidelines for *Annona Cherimola*, Apricot (Revision), Citrus Rootstocks, Fig, Grapefruit and Pummelo, Lemon and Lime, Mandarin, Orange, Passion Fruit, Persimmon (Revision), Prickly Pear (*Opuntia*), Quince (Revision), and Raspberry (Revision). In addition, the following other items were planned for discussion: short reports on new developments in member States in plant variety protection in fruit species; questions on the testing of varieties of fruit species; important decisions taken during the previous sessions of the Working Party and the Committee; discussion on new multi- and interspecific hybrids; new methods, techniques and equipment in the examination of varieties; complementary documents for the General Introduction.

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