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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL COMMITTEE
Fortieth Session
Geneva, March 29 to 31, 2004

REPORT

adopted by the Technical Committee

Opening of the Session

*1. The Technical Committee (TC) held its fortieth session in Geneva from March 29 to 31, 2004. The list of participants is reproduced in Annex I to this report.

*2. The session was opened by Mr. Michael Camlin (United Kingdom), Chairman of the TC, who welcomed the participants, especially those from Lithuania and Tunisia who had become members of the Union since the thirty-ninth session of the TC, held in Geneva from April 7 to 9, 2003, taking the number of members of the Union to 54. He noted that, in addition, Poland had acceded to the 1991 Act of the UPOV Convention since that meeting.

Adoption of the Agenda

*3. The TC adopted the agenda as presented in document TC/40/1.

* The asterisked paragraphs in this report are reproduced from document TC/40/10 (Report on the Conclusions).

Report on Relevant Matters Discussed in the Last Sessions of the Administrative and Legal Committee, the Consultative Committee and the Council

4. The Vice Secretary-General provided an oral report on the forty-seventh and forty-eighth sessions of the Administrative and Legal Committee (CAJ), the sixty-fifth and the sixty-sixth sessions of the Consultative Committee and the twentieth extraordinary session and the thirty-seventh ordinary session of the Council.

5. The Vice Secretary-General reported that at its twentieth extraordinary session, held in Geneva on April 11, 2003, the Council had elected Miss Enriqueta Molina Macías (Mexico) as Vice-President of the Council. It had also examined the law of Viet Nam and agreed a “Position of UPOV concerning Decision VI/5 of the Conference of the Parties to the Convention on Biological Diversity (CBD)” on the basis of a memorandum, prepared by the Office of the Union on Genetic Use Restriction Technologies.

6. At its thirty-seventh ordinary session held in Geneva on October 23, 2003, the Council decided to re-appoint Dr. Kamil Idris as Secretary-General of UPOV for the period December 1, 2003, to November 30, 2009 and to extend the term of Mr. Rolf Jördens as Vice Secretary-General of UPOV until November 30, 2006. The Council elected, in each case for a term of three years: Miss Enriqueta Molina Macías (Mexico), as President of the Council, and Mr. Doug Waterhouse (Australia), as Vice-President of the Council. The laws of the Hashemite Kingdom of Jordan, the Republic of Iceland, the Republic of Uzbekistan and the Republic of Singapore were examined. The Council adopted a document entitled “Access to genetic resources and benefit-sharing” as a suitable reply of UPOV to the Notification of June 26, 2003, from the Executive Secretary of the CBD. The work of the TC, the Technical Working Parties and the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular, as given in document C/37/10, was noted and the programs of work set out in that document were approved.

7. The Vice Secretary-General reported that the draft Program and Budget for the 2004-2005 biennium, approved by the Council, resulted in the loss of three posts from the Office of the Union and required that operating expenses be decreased by: (i) a decrease in support services by WIPO because of the reduction in the number of staff of the Office of the Union; (ii) a reduction in the number of documents mailed to be achieved through partial replacement by electronic distribution; and (iii) a reduction in the cost of translation of documents to be achieved through prioritization of activities. He noted that the prioritization in translation work would be given to appropriate sessions of Council, Consultative Committee, Administrative and Legal Committee (CAJ) and TC documents and that certain other documents, for example, Test Guidelines, would only be translated as far as funds were available. With regard to reductions in the mailing of documents, he explained that documents for the Technical Working Party sessions would no longer be mailed and would only be available from the UPOV Website. He anticipated that the same approach would be adopted for the TC from 2005.

8. The TC heard that, at its forty-seventh session on April 10, 2003, the CAJ considered a memorandum, prepared by the Office of the Union, on Genetic Use Restriction Technologies and approved the document: “Position of the International Union for the Protection of New Varieties of Plants (UPOV) concerning Decision VI/5 of the Conference of the Parties to the Convention on Biological Diversity (CBD),” and recommended its adoption by the Council of UPOV on April 11, 2003. The CAJ also approved a document on the notion of “Essentially Derived Variety” in the breeding of ornamental varieties document which appeared in

revision made in Annex III to the CAJ report (document CAJ/47/8). It also considered a document on specific issues concerning the interface between patents and breeders' rights, and further discussions on this item took place at the forty-eighth session of the CAJ, held in Geneva on October 20 and 21, 2003. At its forty-eighth session, the CAJ also developed a document entitled "Access to genetic resources and benefit-sharing" as a suitable reply of UPOV to the Notification of June 26, 2003, from the Executive Secretary of the CBD for agreement by the Council. In respect of acts done privately and for non-commercial purposes and the farmer's privilege under the 1991 Act of the UPOV Convention, the CAJ proposed to draft a document in the form of draft explanatory notes on the exceptions under Article 15(1)(i) and (2) of the 1991 Act that could serve as guidance in the drafting of national laws concerning those exceptions. It was agreed that a first draft of that document would be presented for consideration by the CAJ at its fiftieth session in October 2004. The CAJ decided to request the Office of the Union to draft recommendations on the transfer of material for the purposes of examination of distinctness, uniformity and stability for the forty-ninth session of the CAJ in April 2004. In its consideration of recommendations to ensure the independence of those DUS examination centers which have, or have links to, breeding activities, it was agreed that draft recommendations, incorporating the suggestions and modifications made during the meeting, would be prepared for the forty-ninth session of the CAJ in April 2004. The CAJ also received reports on the project to consider the publication of variety descriptions, the review of the UPOV-ROM Plant Variety Database, UPOV information databases and the *Ad hoc* Working Group on Variety Denominations (WG-VD). The CAJ heard that the WG-VD had studied a third draft of document "Draft Explanatory Notes on Article 20 of the 1991 Act of the UPOV Convention Concerning Variety Denominations" and had started discussions on a document containing a proposal to revise UPOV Recommendation 9 and the list of classes for variety denomination purposes.

9. The Vice Secretary-General recalled that the fifth Asian Regional Technical Meeting for Plant Variety Protection took place in Hanoi from February 16 to 20, 2004. One of the items discussed at the meeting was possible regional cooperation in DUS testing. It was also explained that there was increasing focus on the development of Test Guidelines, within the context of the UPOV Technical Working Parties, as set out in document TGP/7 "Development of Test Guidelines".

10. The Delegation of the United Kingdom congratulated the Office of the Union on balancing its budget for the 2004-05 biennium.

Progress Reports on the Work of the Technical Working Parties, Including the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT), and the *Ad hoc* Crop Subgroups on Molecular Techniques (Crop Subgroups)

Technical Working Party for Agricultural Crops (TWA)

11. Mr. Michael Camlin (United Kingdom) explained that, because Mr. Carlos Gómez Etchebarne (Uruguay) had been unable to attend the thirty-second session of the TWA, Mr. Camlin had been requested to act as temporary chairman. Mr. Camlin reported the following:

12. The TWA held its thirty-second session in Tsukuba, Japan, from September 8 to 12, 2003, under the chairmanship of Mr. Michael Camlin (United Kingdom),

acting Chairman of the TWA. The Report on the Conclusions is contained in document TWA/32/10 and the detailed Report appears in document TWA/32/11.

13. The session was attended by 77 participants from 18 members of the Union, eight observer States and two observer organizations. The participants included the trainees from a plant variety protection training course, organized by the Japan International Cooperation Agency (JICA), running from August 13 to October 25, 2003. The TWA noted that the preparatory workshop held during the afternoon of September 7, 2003, prior to the TWA meeting, was attended by 11 participants from eight members of the Union.

14. The TWA received short reports on plant variety protection from a number of countries. The TWA also received an oral report from the Office of the Union on the latest developments in UPOV, including a summary of developments in the Council, the Committees and the other Technical Working Parties.

15. Following the request of the TC at its thirty-ninth session, the TWA considered a report on developments in molecular techniques, based upon document TC/38/14-CAJ/45/5, during which experts from France and the United Kingdom made presentations on the three options proposed for the possible use of molecular techniques in DUS testing. The TWA received reports on the Soybean and Sugarcane Crop Subgroup meetings, which had met immediately after the thirty-first meeting of the TWA in Rio de Janeiro, Brazil, on September 27, 2002. The TWA received an oral report from Mr. Gerhard Deneken (Denmark) on the eighth session of the BMT, which had taken place in Tsukuba, Japan, from September 3 to 5, 2003. It was highlighted that the BMT had agreed to the preparation of "BMT Guidelines" to harmonize methodologies for the generation of molecular data in order to ensure that the quality of the data produced would be universally acceptable for use in variety characterization. Experts from Australia and Brazil reported on developments in molecular markers for Sugarcane and Soybean, respectively, in their countries.

16. The TWA received reports from the coordinators on the model studies for Barley and for Potato within the project to consider the publication of variety descriptions. In the case of potato, the TWA agreed that the model study should include the 326 varieties included in the lists of more than one country, plus additional varieties to be provided by other interested parties before December 1, 2003. In the case of Barley, the TWA agreed that it should cover all barley types and not just spring types and that the request for descriptions should allow countries to indicate where they had already contributed data to the earlier study, reported in document TWA/29/19, and did not wish to provide further information. The TWA finally noted that the GAIA software might be a useful tool for comparing descriptions in the study.

17. The TWA received reports on the project for exchanging seed between interested countries of selected varieties for Lupins, Rice and White Clover. In the case of Rice, the TWA received an oral report and visited the field trial where the varieties were grown. The TWA agreed that a document should be prepared for its thirty-third session, comparing the descriptions of the varieties grown in Tsukuba, Japan, with the descriptions produced in the countries providing the seed. The TWA agreed that the project should be repeated with interested countries in 2004, with the aim of identifying the minimum number of example varieties which could constitute an "East Asian" set of example varieties for the Test Guidelines for Rice. The TWA also agreed that experts from Brazil, Hungary, Japan and Mexico would exchange seed of varieties of Grain Amaranth and would report the results at the thirty-third session. It was agreed that the expert from Mexico would be the coordinator of the group.

18. The TWA discussed the review of UPOV information databases on the basis of document TWA/32/3. It concluded that the most effective way of checking the UPOV codes would be to invite individual experts to check the genera and species in document TC/39/13, Annexes I and II, within particular crop types (i.e. beets, brassicas and linseed, cereals, forage grasses, forage legumes, grain legumes) and to provide their comments to the Office of the Union by December 1, 2003.

19. The TWA discussed a number of draft TGP documents, with priority being given to TGP/7 "Development of Test Guidelines" and to document TC/39/6 Add. "Project for the development of TGP documents". It also discussed TGP/12.1.2 Draft 1 "Characteristics expressed in response to external factors: chemical response", TGP/12.1.3 Draft 1 "Characteristics expressed in response to external factors: insect resistance" and TGP/13 Draft 1 "General guidance for new types and species".

20. The TWA finalized the draft Test Guidelines for Lupins, Potato and Rice for submission to the TC. In relation to the Test Guidelines for Rice, the TWA agreed that the Test Guidelines should be submitted to the TC for adoption on the basis of a minimal set of example varieties which had been verified by the leading expert and on the basis that regional sets of example varieties would be incorporated as these became available. The TWA planned to continue discussion on Test Guidelines for Coffee, Ginseng, Grain Amaranth, Lotus, Lucerne (Revision), Medicago (excluding *M. sativa* L.) and Sesame. It decided to begin work on Test Guidelines for Hop, Ryegrass (Revision), Sheep and Red Fescue (Revision) and Tea and noted that the TWV planned to discuss the Test Guidelines for French Bean and Pea.

21. At the invitation of Poland, the TWA agreed to hold its thirty-third session in Słupia Wielka, Poland, from June 28 to July 2, 2004.

22. The TWA noted that it had received interest to host future meetings from: South Africa (2005); New Zealand (2006) and heard that Hungary had made an offer to host the thirty-sixth session of the TWA in 2007. China, Kenya and the Republic of Korea expressed their interest in hosting a future session of the TWA.

23. The TWA proposed to discuss the following items at its next session: Short reports on developments in plant variety protection from members and observers; Report on developments within UPOV; Developments on molecular techniques; Project to consider the publication of variety descriptions; Project for exchanging seed of selected varieties between interested countries; Review of UPOV information databases; TGP documents; Discussions on draft Test Guidelines; Recommendations on draft Test Guidelines; Date and place of next session; Future program.

Technical Working Party on Automation and Computer Programs (TWC)

24. In the absence of Mr. Uwe Meyer (Germany), Chairman of the TWC, Mrs. Beate Rucker (Germany) reported the following:

25. The TWC held its twenty-first session in Tjele, Denmark, from June 10 to 13, 2003, under the chairmanship of Mr. Uwe Meyer (Germany). The Report on the Conclusions is contained in document TWC/21/9 and the detailed Report appears in document TWC/21/10.

26. The session was attended by 27 participants from 17 members of the Union and one observer organization. The TWC was welcomed by Mr. Ole Olsen, Director of the Danish Institute of Agricultural Science, who gave a report on the activities of the Institute. The TWC noted that the preparatory workshop held during the afternoon of June 9, 2003, prior to the TWA meeting, was attended by 12 participants from ten members of the Union and one international organization.

27. The TWC received short reports on plant variety protection from a number of countries. The TWC also received an oral report from the Office of the Union on the latest developments in UPOV, including a summary of developments in the Council, the Committees and the other Technical Working Parties.

28. The TWC discussed the project to consider the publication of variety descriptions and made the following recommendations:

(a) where practically possible, the study should be conducted on all characteristics included in the UPOV Test Guidelines;

(b) contributors of variety descriptions should be requested to provide their “official” descriptions of the varieties concerned, i.e. the description resulting from the DUS examination of the variety. In making this recommendation it noted that the description may have been re-calibrated in the meantime, but considered that if such changes could not be accommodated in the comparison of variety descriptions the aims of the project could not be met;

(c) in the case of authorities wishing to contribute variety descriptions for which they did not have “official” descriptions, e.g. for varieties which had been acquired for their reference collections, the description to be provided should be that produced at the end of the first complete cycle of testing in which the variety was included;

(d) contributors should be requested to specify the reference of the UPOV Test Guidelines on which the description had been developed; and

(e) contributors should be requested to provide the variety denomination, breeder’s reference, breeder and applicant for each variety to verify, as far as possible, whether varieties were the same or different.

29. It also agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety.

30. The TWC discussed the review of UPOV information databases based upon documents TC/39/13 and TC/39/14–CAJ/47/5. With regard to the UPOV code proposed in document TC/39/13, the TWC agreed with the structure of the code and the proposed program for its introduction. It recommended that the database should indicate which Technical Working Party would be responsible for checking the validity of each code; that, where appropriate, the database should indicate the relevant Test Guidelines for each code and, furthermore, that the third element of the code should be used to generate different codes for different types of varieties of the same species or sub-species, which were covered by different Test Guidelines. The TWC agreed that new codes created by the Office of the Union could be used

immediately. With regard to document TC/39/14–CAJ/47/5 on the review of the UPOV-ROM plant variety database, the TWC agreed that consideration should be given to the creation of a field to indicate whether the variety denomination is in the form of a “code”, rather than a “fancy name”.

31. The TWC discussed a number of draft TGP documents, with priority being given to TGP/7 Draft 3 “Development of Test Guidelines” and to document TC/39/6 Add. “Project for the development of TGP documents”. With regard to other TGP documents, the TWC discussed TGP/8.2 Draft 2 “Validation of Data and Assumptions”; TGP/8.4 Draft 2 “Types of Characteristics and their Scale Levels” and TGP/8.5 Draft 2 “Statistical Methods for DUS Examination”. In relation to the organization of TGP/8, the TWC agreed to restructure the content of the document. The TWC also discussed TGP/9.4.1 Draft 2 “Examining Distinctness in Different Types of Varieties: General”; TGP/9.7 Draft 2 “Recommended Statistical Methods-COYD”; TGP/10.2 Draft 2 “Assessing Uniformity According to the Features of Propagation”; TGP/10.3.1 Draft 2 “Recommended Statistical Methods: COYU”; TGP/10.3.2 Draft 2 “Recommended Statistical Methods: Off-Types” and TGP/14.3 Draft 1 “Statistical Terms”.

32. The TWC discussed the use of statistical methods, based on document TWC/21/3 presenting the software package PREDIP. It agreed that the methods used in PREDIP were to be viewed as methods under development.

33. The TWC discussed the use of incomplete block designs in DUS. It focused on the efficiency and limitations of α -designs, especially for grouping purposes, and considered an example of the use of incomplete block designs in DUS herbage trials. The TWC agreed that further studies were necessary to make a more detailed recommendation.

34. The TWC discussed the use of the Chi square distribution for DUS testing and the calculation of phenotypic distances. With regard to the calculation of phenotypic distances, the TWC agreed that methods used in GAIA were to be viewed as methods under development.

35. The TWC agreed that a new survey on the probability standards for COY should be prepared.

36. The TWC agreed that the list of statistical documents be posted on the TWC section of the UPOV Website.

37. At the invitation of the expert from Japan, the TWC agreed to hold its twenty-second session in Tsukuba, Japan, from June 14 to 17, 2004.

38. During the twenty-second session, the TWC planned to discuss or re-discuss the following items: Reports from members and observers; Reports on developments within UPOV; Molecular techniques; Project to Consider the Publication of Variety Descriptions; UPOV Databases; TGP documents; Assessment of distinctness for segregating characteristics; Incomplete block design in DUS trials; Efficiency of incomplete block designs in DUS herbage trials; Generalized linear models; Standard probability levels for COY; selection of the optimum number of plants for COY; COYU Methodology; COYU: moving average; Calculation of phenotypic distances; Image analysis in peas; Date and place of the next session; Future program and the Report on the Conclusions of the Session.

Technical Working Party for Fruit Crops (TWF)

39. In the absence of Mr. Erik Schulte (Germany), Chairman of the TWF, Mr. Chris Barnaby (New Zealand) reported the following:

40. The TWF held its thirty-fourth session in Niagara Falls, Canada, from September 29 to October 3, 2003 under the chairmanship of Mr. Erik Schulte (Germany). The TWF was welcomed by Mr. Glyn Chancey, Director of the Plant Production Division of the Canadian Food Inspection Agency (CFIA), and Ms. Valerie Sisson, Commissioner of the Plant Breeders' Rights Office, Canada. The Report on the Conclusions is contained in document TWF/34/6 and the detailed Report appears in document TWF/34/7.

41. The session was attended by 24 participants from 15 members of the Union and one observer organization. The TWF noted that the preparatory workshop held during the afternoon of September 28, 2003, prior to the TWF meeting, was attended by four participants from four members of the Union.

42. The TWF received a presentation on plant breeders' rights in Canada and received oral reports on developments in plant variety protection from participants and from the Office of the Union on the latest developments within UPOV.

43. The TWF received a report from the Technical Working Party for Ornamental Plants and Forest Trees (TWO) on the preparation and issuing of a questionnaire seeking information on the determination of off-types with particular regard to variegated varieties. The TWF agreed that this questionnaire should also be sent to members of the TWF to obtain information on how the matter is handled for fruit crops and that the results of the survey would be presented at the TWO and the TWF sessions in 2004.

44. The TWF received reports from the coordinators on the model studies for Apple and for Strawberry within the project to consider the publication of variety descriptions. In the case of Apple, the TWF agreed that the model study should proceed with ten varieties, using all the characteristics included in the Test Guidelines for Apple. The TWF noted that the varieties might be known by different names in different countries, and agreed that the requests for descriptions should also indicate other names of the variety to ensure that as many descriptions of a variety as possible could be obtained. It was agreed to invite all interested parties to contribute descriptions. It was also agreed that descriptions other than official ones, and based upon different versions of the Test Guidelines, could be submitted for the study.

45. In the case of Strawberry, the TWF was informed that around 20 varieties occurred in more than one territory. On the basis of a proposal of the Coordinator and comments from the TWF, a list of ten varieties would be finalized, and the Office of the Union would issue a request for descriptions to all interested parties.

46. The TWF discussed the review of UPOV information databases and, in particular, the development of the UPOV code system. It was agreed that all experts should check species in which they had particular expertise and, in addition, selected experts would check the proposed codes provided in the Annexes to document TWF/34/3.

47. The TWF discussed a number of draft TGP documents, with priority being given to TGP/7 "Development of Test Guidelines" and to document TC/39/6 Add. "Project for the

development of TGP documents”. In relation to TGP/7, the TWF discussed and agreed a new ASW for an explanation for the growing cycle in fruit crops. It also discussed TGP/4.2 Draft 1 “ Variety Collections for Tree and Perennial Species”, TGP/13 Draft 1 “Guidelines for New Types and Species”, TGP/14.2.1 Draft 2 Rev. “Botanical Terms: Plant Shapes”, TGP/14.2.2 Draft 1 “Botanical Terms: Hair Types” and TGP/14.2.3 Draft 1 “Botanical Terms: Color”.

48. The TWF finalized the draft Test Guidelines for Apricot (Revision), Cactus Pear and Persimmon (Revision) for submission to the TC. However, subsequent to the meeting, it was agreed that the Test Guidelines for Apricot should be rediscussed at the thirty-fifth session of the TWF. The TWF planned to continue discussion on Test Guidelines for Apple (Revision), Avocado (Revision), Blackberry and Hybrid berries (Revision), Coffee, Mango (Revision), Pecan Nut and decided to discuss new draft Test Guidelines for Banana (*Musa* spp.) (Revision), Cherry (Revision), *Crataegus* spp. (Hawthorn), Fig, Hop, Passion Fruit (edible species) and Pineapple. It also decided to discuss new draft Test Guidelines for Blackcurrant (Revision) during its session in 2005.

49. At the invitation of the expert from Germany, the TWF agreed to hold its thirty-fifth session in Marquardt (Potsdam), Germany, from July 19 to 23, 2004.

50. During the thirty-fifth session, the TWF planned to discuss or re-discuss the following items: Short reports on developments in plant variety protection from members and observers; as well as within UPOV; Developments on molecular techniques; Project to consider the publication of variety descriptions; Review of UPOV information databases; Criteria for determining off-type plants; Definition of Maturity of Fruit; TGP documents; and Discussions and Recommendations on draft Test Guidelines.

Technical Working Party for Ornamental Plants and Forest Trees (TWO)

51. Mr. Chris Barnaby (New Zealand), Chairman of the TWO, reported the following:

52. The Technical Working Party for Ornamental Plants and Forest Trees (TWO) held its thirty-sixth session in Niagara Falls, Canada, from September 22 to 26, 2003, under the chairmanship of Mr. Chris Barnaby (New Zealand). The TWO was welcomed by Ms. Valerie Sisson, Commissioner, Plant Breeders’ Rights Office, Canada, on behalf of the Plant Breeders’ Rights Office of the Canadian Food Inspection Agency (CFIA). The Report on the Conclusions is contained in document TWO/36/6 and the detailed Report appears in document TWO/36/7.

53. The session was attended by 27 participants from 13 members of the Union and three observer organizations. The TWO noted that the preparatory workshop held during the afternoon of September 21, 2003, prior to the TWO meeting, was attended by 12 participants from five members of the Union and three international organizations.

54. The TWO received a presentation on plant breeders’ rights in Canada from Ms. Sandy Marshall and short oral reports on developments in plant variety protection from participants. The TWO received an oral report from the Office of the Union on the latest developments within UPOV.

55. The TWO noted the report on the work of the *Ad hoc* Working Group on Variety Denominations (WG-VD) and agreed to propose that the Chairman of the TWO should participate in the WG-VD.

56. The TWO received an oral report from the Office of the Union on the latest developments concerning the use of molecular techniques in DUS Testing within UPOV, based on document TC/38/14 Add.-CAJ/45/5 Add. and an oral report from the Chairman of the Rose Crop Subgroup who reported that the meeting of the Rose Crop Subgroup, planned to take place prior to the meeting of the TWO, had been postponed because of a lack of papers. The TWO noted that a suitable date for a future meeting would be arranged when sufficient papers were available.

57. The TWO discussed the project to consider the publication of variety descriptions presented in document TWO/36/2 and received an oral report from Ms. Andrea Menne, Coordinator of the model study on Petunia. The TWO noted that the first phase of the model study on Petunia had been based on the characteristics included in the Technical Questionnaire of the Test Guidelines. It noted that there was a high degree of harmonization in the variety descriptions for the selected characteristics, despite the fact that the varieties were described before the Test Guidelines were introduced. With regard to the next phase of the study, the TWO agreed that descriptions should be sought for the same varieties and characteristics, including a request for color photographs, from further countries. Concerning the possibility of a model study on Rose, it was confirmed that there was an insufficient number of countries conducting DUS trials on rose to make this a useful study, and the TWO agreed to propose a study on *Alstroemeria* instead, with Mr. Joost Barendrecht (Netherlands) as Coordinator.

58. The TWO discussed the review of UPOV information databases and, in particular, the development of the UPOV code system. It was agreed that all experts should check species in which they had particular expertise and, in addition, selected experts would check the proposed codes provided in the Annexes to document TWO/36/3.

59. The TWO noted the result of the survey on testing seed-propagating ornamental varieties presented in document TWO/36/4. It agreed that the survey should not be repeated in 2004, but that participants should report on relevant future developments.

60. The uniformity requirements for variegated varieties was the subject of discussion and it was agreed that this raised general questions concerning the determination of off-types. Therefore, the TWO decided that a questionnaire, seeking information on the proportion of plants which would need to be affected by a mutation or variation to be considered an off-type, should be issued. It also agreed that, subject to the agreement of the TWF, it should also be sent to members of the TWF to obtain information on how the matter is handled for fruit crops.

61. The TWO discussed a number of draft TGP documents, with priority being given to TGP/7 "Development of Test Guidelines" and to document TC/39/6 Add. "Project for the development of TGP documents". It also discussed TGP/4.2 Draft 1 "Variety Collections for Tree and Perennial Species", TGP/13 Draft 1 "Guidelines for New Types and Species" and TGP/14.2.3 Draft 1 "Botanical Terms: Color".

62. The TWO finalized the draft Test Guidelines for *Alstroemeria* (Revision), *Catharanthus roseus*, *Clematis*, *Hypericum*, *Impatiens walleriana*, and *Verbena* for submission

to the TC. However, it was later agreed that the Test Guidelines for *Alstroemeria* should be rediscussed at the 2005 session of the TWO. The TWO planned to continue discussion on Test Guidelines for *Amaranth*, *Argyranthemum*, *Brachyscome*, *Dahlia*, *Poinsettia* (Revision), *Rose* (Revision), *Tagetes*, and *Waxflower* and decided to discuss new draft Test Guidelines for *Antirrhinum*, *Chrysanthemum* (Revision), *Eucalyptus* (part of genus only), *Gypsophila*, *Hibiscus*, *Phlox*, and *Tulip* (Revision). It also decided to discuss new draft Test Guidelines for *Diascia* and *Hevea* during its session in 2005.

63. At the invitation of the expert from Germany, the TWO agreed to hold its thirty-seventh session in Hanover, from July 12 to 16, 2004.

64. During the thirty-seventh session, the TWO planned to discuss or re-discuss the following items: Short reports on developments in plant variety protection from members and observers; Report on developments within UPOV; Developments on molecular techniques; Project to consider the publication of variety descriptions; Review of UPOV information databases; TGP documents; Criteria for determining off-type plants, Discussions on draft Test Guidelines; Recommendations on draft Test Guidelines; Date and place of next session; Future program.

Technical Working Party for Vegetables (TWV)

65. Mr. Kees van Ettehoven (Netherlands), Chairman of the TWV, reported the following:

66. The Technical Working Party for Vegetables (TWV) held its thirty-seventh session in Roelofarendsveen, Netherlands, from June 23 to 27, 2003, under the chairmanship of Mr. Kees van Ettehoven (Netherlands). The Report on the Conclusions is contained in document TWV/37/8 and the detailed Report appears as document TWV/37/9.

67. The session was attended by 39 experts from 16 member States, one observer State and three observer organizations. The TWV noted that the Preparatory Workshop was attended by 11 participants.

68. The TWV received oral reports from the participants on developments in plant variety protection (PVP) in their respective countries. The TWV noted in particular a presentation on a proposal developed in the Netherlands for the involvement of breeders' trials in its DUS examination for plant breeders' rights purposes. It was further reported that a study was underway in the Netherlands, on the use of molecular techniques in the management of reference varieties, where 90 tomato varieties would be used to compare results obtained from morphological characteristics with those obtained from molecular markers. The TWV noted further that a pre-accession process for joining the European Union (EU) was underway in the Czech Republic, Hungary, Poland and in Slovakia.

69. The TWV received an oral report from the Office of the Union on the latest developments on plant variety protection within UPOV and, in particular, those developments concerning the TC and the Technical Working Parties.

70. The TWV received an oral report from the Office of the Union on the latest developments in molecular techniques on the basis of document TC/38/14 Add.–CAJ/45/5 Add.

71. The TWV received an oral report from the Chairman of the *Ad hoc* Crop Subgroup for Mushroom (Mushroom Crop Subgroup). The TWV noted that many so-called “varieties” could not be distinguished using morphological characteristics and agreed that the use of molecular techniques to examine distinctness of such varieties would not be in accordance with the agreed UPOV position.

72. With respect to the Project to Consider the Publication of Variety Descriptions, the TWV noted reports from the Coordinators for Chinese Cabbage and for Lettuce. The TWV agreed that the study on Chinese Cabbage should proceed on all 25 varieties appearing in the lists of two or more countries and that the study on Lettuce should proceed on the basis of 104 varieties which were included by three or more contributors and that a further 28 varieties be selected from the varieties included in the lists of two contributors to ensure involvement of all contributors. The TWV agreed further with the recommendations in document TWV/37/5 and, in particular, that the study should be based on all characteristics in the UPOV Test Guidelines.

73. The TWV received an oral report from the Office of the Union on the plans for the development of UPOV codes and the GENIE database on the basis of document TC/39/13. It also received a report on the plans for improvements to the UPOV-ROM Plant Variety Database on the basis of document TC/39/14–CAJ/47/5. With regard to the development of UPOV codes, the TWV was invited to consider the proposed UPOV codes, relevant to the TWV, as presented in document TWV/37/6.

74. The TWV examined document TGP/7 Draft 3 with its Annexes and made several proposals for amendments. The TWV agreed with the proposals for the development of TGP documents set out in Annexes I to III of document TC/39/6, with the exception that TGP/12.4 (Examination of Scent and Flavor Characteristics) should be deleted from Annex III. The TWV examined document TGP/12.1.1 (Characteristics Expressed in Response to External Factors: Disease Resistance) and agreed that proposals for dealing with a “partial resistance” state should be developed in a future draft.

75. The TWV agreed that Test Guidelines for Industrial Chicory, adopted by the TC at its thirty-seventh session in April 2001, should be partially revised on the basis of comments made by experts from Belgium. It also agreed that the Test Guidelines for Lettuce, adopted by the TC at its thirty-ninth session in April 2003, should be partially revised with respect to the characteristics concerning resistance to downy mildew. The TWV agreed that document TG/90/6(proj.1), Test Guidelines for Vegetable Kale, should be revised to cover only Curly Kale.

76. The TWV agreed to send draft Test Guidelines for Brussels Sprout (Revision), Cabbage (Revision), Carrot (Revision), Chard/Leaf Beet (Revision), Lettuce (Revision), Parsnip, Perilla, Curly Kale (Revision) and Watermelon (Revision) for adoption by the TC at its fortieth session.

77. The TWV agreed to rediscuss draft Test Guidelines for Ginseng, Husk Tomato, Industrial Chicory (Revision), Melon (Revision), Mushroom and Rosemary. The TWV agreed to start, at its thirty-eighth session, discussions on draft Test Guidelines for Chickpea (Revision), French Bean (Revision), Parsley (Revision), Pea (Revision), Pepper (Revision) and Sweetcorn. It was agreed that the TWA should be invited to notify interested experts who would wish to contribute to the development of the draft Test Guidelines for French Bean and Pea.

78. At the invitation of the expert from the Republic of Korea, the TWV agreed to hold its thirty-eighth session in the Republic of Korea from June 7 to 11, 2004.

79. During the thirty-eighth session, the TWV planned to discuss or re-discuss: Short reports on developments in plant variety protection, Molecular Techniques, Project to consider the Publication of Variety Descriptions, Review of UPOV Information Databases, TGP Documents, Discussion on draft Test Guidelines for Chickpea (Revision), French Bean (Revision), Ginseng, Husk Tomato, Industrial Chicory (Revision), Melon (Revision), Mushroom, Parsley (Revision), Pea (Revision), Pepper (Revision), Rosemary, Sweetcorn, Date and place of next session, Future program, Report on the conclusions of the session.

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

80. Mr. Gerhard Deneken (Denmark), Chairman of the BMT, reported the following:

81. The Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT) held its eighth session in Tsukuba, Japan, from September 3 to 5, 2003. The report is contained in document BMT/8/28.

82. The Session was attended by 62 participants from 15 member States, seven observer States and three observer organizations. The participants included the trainees from the three-month plant variety protection training course organized by the Japan International Cooperation Agency (JICA) from August 13 to October 25, 2003. The BMT noted that the Preparatory Workshop was attended by 12 experts.

83. The BMT noted documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. explaining the recent developments in UPOV concerning the use of biochemical and molecular techniques for DUS testing. In particular, it noted the recommendations made by the BMT Review Group concerning the possible use of molecular techniques in DUS testing and the opinions of the TC and the Administrative and Legal Committee (CAJ).

84. The BMT received the reports on the work of the *Ad hoc* Crop Subgroups on Molecular Techniques for Mushroom, for Sugarcane and for Soybean.

85. The BMT noted that there were no proposals from the Technical Working Parties for new crop specific subgroups. With regard to the work of the existing Crop Subgroups, the BMT agreed that these Crop Subgroups should be encouraged to intensify their work and preferably use the forthcoming BMT Guidelines in their work (see paragraph 88 of this document).

86. The BMT heard oral reports from participants on new developments in biochemical and molecular techniques. It noted, in particular, that, although the United Kingdom retained an option to develop an Option 3 (Development of a new system) type approach, it reviewed its research project on molecular markers in Oilseed Rape and Wheat with a view to developing an Option 2 (Calibration of threshold levels for molecular characteristics against the minimum distance in traditional characteristics) type approach and was collaborating with France in the use of GAIA and PREDIP. It noted that a project was underway in the Netherlands to

characterize 90 varieties of tomato using AFLP, microsatellites, SNPs and morphological characteristics, with a view to developing an option 2 approach.

87. The BMT received reports of work on molecular techniques on the following crops: Barley, Bean, Bunching Onion, Carnation, Maize, Cactus Pear, Oilseed Rape, Peach, Pear, Rice, Soybean, Strawberry, Sunflower, Tomato and Wheat.

88. The BMT concluded that there was an urgent need to harmonize methodologies for the generation of molecular data in order to ensure that the quality of the data produced would be universally acceptable for use in variety characterization. It was also noted that it would be useful to provide guidance on the planning of databases for molecular data based on different types of markers. On this basis, the BMT agreed that the Office of the Union should prepare a guidance document ("BMT Guidelines").

89. The BMT received a review of the costs of molecular techniques from the International Seed Federation (ISF). It noted, in particular, that the costs were dependent on throughput numbers. In case of a high throughput analysis, the cost per marker point is at an acceptable level, but then the quality assurance of these data points becomes of higher importance.

90. With respect to statistical methods for data produced by biochemical and molecular techniques, the BMT noted that consultation between crop experts and the Technical Working Party on Automation and Computer Programs (TWC) would be desirable to achieve consensus on the choice of distance measurement method. The BMT also discussed the use of the PREDIP software.

91. Concerning the use of molecular techniques in examining essential derivation, the BMT noted that the ISF General Assembly in May 2004 would consider a proposed threshold, as a trigger point for starting a dispute on essential derivation in Butterhead lettuce. In particular, the ISF would consider three options concerning the use of the threshold as follows:

- (a) allow the result to be used by breeders in whatever way they wished;
- (b) establish a voluntary code of conduct in the same way as for ryegrass; or
- (c) draft an agreement, to be signed by breeders, leading to binding ISF arbitration or settlement in court.

92. In response to the invitation received from the United States of America, the BMT agreed to hold its ninth session in the United States of America in June 2005.

93. During its ninth session, the BMT planned to discuss: Short presentations on new developments in biochemical and molecular techniques by DUS experts, biochemical and molecular specialists, and plant breeders; Reports from the BMT Review Group, TC and/or established Crop Subgroups; Report of work on molecular techniques on a crop-by-crop basis; Recommendations on the establishment of new crop specific subgroups; BMT Guidelines; Construction and standardization of databases of molecular characteristics of plant varieties, Statistical methods for data produced by biochemical and molecular techniques; The use of molecular techniques in examining essential derivation; Date and place of next session; and Future program.

*94. The TC heard from the Chairmen of the respective *Ad Hoc* Crop Subgroups on Molecular Techniques (Crop Subgroups) that meetings of the Crop Subgroups for Potato,

Soybean, Sugarcane and Wheat were planned to be held in association with the thirty-third session of the TWA, to be held in Poland in 2004.

Matters Arising from the Technical Working Parties (TWPs)

95. The Delegation of France recalled that the GAIA software, which had been developed by GEVES (France), had been made available to members of the Union and that a questionnaire had been issued seeking comments on the software. He encouraged recipients to provide their comments and offered assistance to those using the software, particularly in recognition of the fact that parameters would need to be drawn up in each country where the software was to be used.

96. The Delegation of Denmark explained that it had some questions concerning the compatibility of the way in which it currently stored variety description data and the way in which data could be made available for processing by GAIA.

*97. The TC considered document TC/40/3 and noted that the matters arising from the TWPs would be dealt with under the individual items on the agenda.

TGP Documents

*98. The TC considered documents TC/40/5 and TGP/7 Draft 5.

*99. The TC agreed a text for adoption as TGP/7 “Development of Test Guidelines” on the basis of the following amendments to TGP/7 Draft 5:

| <i>Section</i> | <i>Comment</i> |
|----------------|--|
| 2.2.7.3 | <p><u>Main document</u></p> <p>To read: “If it considers that there are technical issues to be resolved, the TC-EDC may seek to resolve the issues with the leading expert, prior to consideration of the Test Guidelines by the TC. Where this is not possible, the TC-EDC may recommend that the TC:</p> <p style="padding-left: 40px;">(a) refer the Test Guidelines back to the TWP (Step 4) or,</p> <p style="padding-left: 40px;">(b) adopt the Test Guidelines subject to further information being provided by the leading expert with the agreement of all interested experts and the Chairman of the TWP concerned.”</p> |
| 4.1.2 | <p><u>Annex 1: TG Template</u></p> <p>Final sentence to read: “One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.”</p> |
| TQ 4 | <p>Footnote to read: “Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.”</p> |

| <i>Section</i> | <i>Comment</i> |
|----------------|---|
| TQ 7 | Footnote to read: “Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.” |
| ASW 4 | <p><u>Annex 2: Additional Standard Wording</u></p> <p>2 (c)</p> <p>To read: “The following text may, for example, be added to appropriate Test Guidelines:</p> <p style="padding-left: 40px;">“The recommended type of plot in which to observe the characteristic is indicated by the following key in the second column of the Table of Characteristics:</p> <p style="padding-left: 80px;">A: spaced plants B: row plot C: special test</p> <p style="padding-left: 40px;">“Other examples may also be developed, for example to refer to other types of plots (e.g. drilled plots).”</p> <p><u>Annex 3: Guidance Notes (GN) for the TG Template</u></p> |
| GN 8 | To read: “Chapter 3.1 makes reference to the number of growing cycles. In some cases it may be necessary to clarify what is meant by a ‘growing cycle.’ In the case of fruit species, additional standard wording has been developed (see ASW 3).” |
| GN 17 | Paragraph 2: To replace “shape” with “profile.” |
| GN 20 | <p>3.3.2.1.2</p> <p>To read: “Even states are seldom indicated in the Test Guidelines. However, where required, the even states should be worded by combining the wording of the preceding and following states, in that order, by using the word ‘to’, e.g. ‘very weak to weak (2)’ (see Section 3.3.1.2).”</p> <p>3.3.2.2.1 and 3.4</p> <p>Rows referring to even states to be deleted from the table.</p> <p>3.6.1</p> <p>First sentence to read: “Different intensities of the same color hue may be presented as quantitative characteristics, if they fulfill the requirements for a quantitative characteristic.”</p> |
| GN 25 | To read: “This box provides the key for guidance on conducting the examination. For example, recommendations on the method of observation (e.g: visual assessment or measurement; observation of single plants or a group of plants) or type of plot (e.g: spaced plants; row plot; drilled plot; special test) may be provided. ASW 4.2 provides possible additional standard wording.” |

| <i>Section</i> | <i>Comment</i> |
|----------------|--|
| GN 28 | 3.3 (ii) To read: “If a characteristic, which is important for the international harmonization of variety descriptions (asterisked characteristic), is not influenced by the year or environment (e.g. qualitative characteristics) <u>and</u> example varieties are not necessary for illustration of the characteristic (see Section 1.1), it may not be necessary to provide example varieties. |
| GN 29 | 2.1 To read: “Where such a variety is used as an example variety and has been registered with a different denomination by some members of the Union, the denomination used in the Table of Characteristics should be the denomination by which it was registered by the first member of the Union granting protection to that variety. Other denominations may be presented in Chapter 8, but only where the alternative denominations clearly, and exclusively, identify the variety concerned.” |

*100. The TC noted that Annex 4 “Collection of Approved Characteristics” would be made available on the UPOV Website. It further noted that a new section on the development of individual authority Test Guidelines would be developed in future. With regard to the “drafter’s kit”, the TC noted that this was intended for use by drafters only after the 2004 sessions of the TWPs.

*101. The TC approved the structure of documents TGP/3 “Varieties of Common Knowledge”, TGP/4 “Management of Variety Collections” and TGP/9 “Examining Distinctness”, as presented in Annex I to document TC/40/5, on the basis that the working title of TGP/4 would be “Constitution and Management of Reference Collections”, but would be finalized at a later stage. Consideration would also be given to the inclusion of the role of variety descriptions in the relevant section(s).

*102. The TC approved the content, organization and program of development for TGP documents, as presented in Annex II to document TC/40/5, on the basis that TGP/5.8.2 “Guidance on the use of Interim Reports” would not be developed at this time. It also agreed that Annex II should be revised to incorporate the individual sections of TGP/4 and TGP/9.

UPOV Information Databases

*103. The TC considered document TC/40/6-CAJ/49/4. It was explained by the Office of the Union that the information provided in the Annexes to that document did not correspond exactly to that stated in the document. In particular, to avoid the document becoming too voluminous, Annexes I and II presented only the amendments to document TC/39/13, Annexes I and II. Furthermore, Annex IV presented the relevant TWP for checking purposes, but did not provide information on the authority entering the data in the UPOV-ROM.

UPOV Code

104. A representative of the European Union (EU) explained that the Community Plant Variety Office (CPVO) intended to use the UPOV Code System in its centralized database of variety denominations (CPVO database) and emphasized the need for a quick and efficient system for the introduction of new codes and amendment of existing codes where required. It expressed its appreciation to the Office for its initiative and work done on the development of the UPOV Code System.

*105. With regard to the issue of intergeneric and interspecific hybrids, the TC agreed that the UPOV code should reflect the taxonomic classification. Thus, for example, if a genus exists for a hybrid formed between two genera (e.g. Triticale), the “genus element” of the UPOV code would be based on the “hybrid” genus. The TWPs would be requested to consider how to address the cases where a specific genus or species for hybrids did not exist.

*106. With regard to codes related to “multiple ranked names”, as set out in document TC/40/6-CAJ/49/4, paragraph 6(v), the TC noted that the proposal from the rapporteur of the International Code of Nomenclature for Cultivated Plants (ICNCP) appeared to have potential advantages. However, it was also noted that, until now, UPOV had not used this system in relation to naming for variety denomination classes and Test Guidelines. Nevertheless, it recognized that once the codes were adopted it would be difficult to introduce a change at a later time, and it therefore proposed that this matter should be considered by the TC before the codes were finalized. To avoid delay in the agreement of codes, it agreed that the Office of the Union (the “Office”), in conjunction with the chairmen of the TC, TWA and TWV, should develop a proposal for consideration by the TWA, TWV and the *Ad hoc* Working Group on Variety Denominations (WG-VD). If the proposal was agreed by all parties, this would be the basis for codes for *Beta* and *Brassica*. In the absence of agreement by all parties, the code would be based on the proposals presented in Annexes I and II of document TC/40/6-CAJ/49/4. On that basis, the TC agreed to the codes as presented in Annexes I and II of document TC/40/6-CAJ/49/4. In agreeing the codes, the TC noted that, with the exception of some of the codes developed for taxa with the International Seed Testing Association (ISTA) stabilized names, these Annexes presented codes as checked and amended by the appointed TWP experts.

*107. Concerning the approximately 600 entries presented in Annex III and the new entries proposed in Annex IV to document TC/40/6-CAJ/49/4, the TC agreed that these should be checked by the appropriate TWP during the 2004 sessions. Where, after consultation with the TWP Chairmen, an appropriate TWP could not be clearly identified, the country contributing data for the genera / species concerned would be identified and requested to check the code. In the meantime, the codes in Annexes III and IV of document TC/40/6-CAJ/49/4 would be included in the GENIE database.

*108. The TC agreed to the following procedure for the introduction and amendment of codes:

(1) Responsibility for the UPOV Code System

The Office is responsible for the UPOV Code System and the individual codes.

(2) Repository of UPOV Codes

The definitive collection of UPOV codes would exist exclusively in the GENIE database.

(3) Introduction of New UPOV Codes / Amendments to UPOV Codes

(a) In the first instance, the Office would draft a code on the basis of the Germplasm Resources Information Network (GRIN) database, or other suitable references if the species concerned was not included in the GRIN database.

(b) Where the Office was aware of relevant experts for the genus or species concerned, or was advised of such experts, for example by the proposer of a new code, it would, wherever possible, check its proposals with those experts before creating the code.

(c) New codes might be proposed by any party, but it was expected that the majority of proposals would be made by contributors to the Plant Variety Database. Where the Office received such proposals, it would respond by updating the GENIE database with the new codes in a timely manner and, in particular, would seek to ensure that new codes were available to allow their use for the forthcoming edition of the Plant Variety Database. In addition, the Office would add new codes where it identified a need.

(d) In general, amendments to codes would not be made as a result of taxonomic developments unless these resulted in a change to the genus classification of a species. The UPOV recommendations on variety denominations were based on the general principle that, unless the list of classes applies, all taxonomic units which belonged to the same genus were closely related. Therefore, it was important that the first element of the code could be used to sort species into the correct genus. The codes would also be amended if there were consequences for the content of a variety denomination class where the list of classes applied. Amendments to UPOV codes would be handled by the same procedure as the introduction of new codes as in paragraphs (a) and (b), above. However, in addition, all members of the Union and contributors of data to the Plant Variety Database would be informed of any amendments.

(e) New and amended codes would be presented to the relevant TWP(s) for comment at their first available session. If the TWP recommended any change, this would be treated as an amendment according to paragraph (d), above.

(4) Updating of Information Linked to UPOV Codes

(a) UPOV codes might need to be updated to take account of, for example, changes in taxonomic classification, new information on common names, etc. In the case of changes of taxonomic classification, this might, although it was emphasized that this was not necessarily the case (see section (3)(d), above), result in a need to change the UPOV code. In such cases, the procedure was as explained in section (3), above. In other cases, the Office would amend the information linked to the existing code as appropriate.

(b) The TC, the TWPs and individual communications from members and observers of these bodies would be the principle routes by which the Office would update its information.

*109. The TC agreed that members of the Union and other contributors should be encouraged to start to use the UPOV codes when contributing data to the UPOV-ROM as soon as the GENIE database was made available on the UPOV Website. Guidance on how to use the GENIE database for this purpose would be issued at that time. However, in the first instance, such use would be optional.

Web-based Plant Variety Database

110. The Vice Secretary-General reported on developments concerning the development of a Memorandum of Agreement (the Memorandum) between UPOV and the CPVO which would set out cooperation for the development and maintenance of the Web-based UPOV Plant Variety Database and the CPVO database. It was explained that the purpose of that memorandum was to set out cooperation for the development and maintenance of the Web-based UPOV Plant Variety Database and CPVO variety denomination database in a way which will minimize the overall cost of development, maximize the completeness of the UPOV Plant Variety Database and CPVO variety denomination database and secure compatibility of both databases. In addition to a close cooperation in the development of the databases, another important field of collaboration would be the sharing of the UPOV-CPVO efforts to collect information for populating and maintaining the databases, thereby avoiding duplication of work.

111. It was explained that some of the key aspects of the Memorandum of Understanding were planned to be as follows:

(a) Database Software

In the first instance, CPVO will provide UPOV (“the Parties”) with its proposed database model and data dictionary. In the second instance, UPOV will offer initial comments and suggestions with regard to compatibility of the software for the UPOV database. Subsequent collaboration between the Parties in any refinement to the CPVO proposal will take the form of meetings and/or exchange of correspondence as considered appropriate by the Parties. Following this process, CPVO will develop its database software. The database software that CPVO decides to use and release (the “CPVO software”) will, subject to certain conditions, be offered to UPOV free of charge. CPVO will inform UPOV of subsequent updates of the CPVO software. UPOV will advise CPVO on whether it wishes to use the CPVO software or whether it will develop its own software (the “UPOV software”). If UPOV decides to develop its own software, it will provide CPVO with its proposed database model and data dictionary in order to seek comments and suggestions with regard to compatibility of the software for the CPVO database.

(b) Maintenance of Data

The responsibility for providing data would be as follows:

(i) subject to the agreement of the countries and owners of other registers concerned, CPVO is to be responsible for variety denomination data for all official registers kept by authorities of the Member States of the European Union, official registers kept by authorities of the European Economic Area (EEA) and Switzerland, the European Union Common Catalogues and other relevant registers, such as the Dutch database PLANTSCOPE;

(ii) UPOV is to be responsible for variety denomination data for all official registers kept by authorities of members of the Union which are not mentioned in (i). UPOV is also to be responsible for data from international organizations (e.g. Organisation for Economic Co-operation and Development (OECD)); and

(iii) for other data, to be agreed by the Parties on a case-by-case basis.

(c) Use of Data by UPOV and CPVO

UPOV will retain the possibility of charging parties other than UPOV members and contributors to the database (“third party users”) for the use of any future database. The use of the CPVO database will be restricted to checking variety denominations for compliance with the requirements of the Community Plant Variety Rights (CPVR) system. In the first instance, use will be confined to contributors of data, comprising CPVO, national authorities and other data providers (e.g. PLANTSCOPE). However, it is possible that, in future, other parties, including breeders, would be granted use of the database. CPVO will retain the possibility of providing the database not only to contributors to the database but also to third party users, free of charge.

(d) Access to Raw Data for Third Parties

The UPOV policy is that raw data will be available to members of the Union and contributors of data, but will not be available to other parties. The CPVO policy is that raw data will be available to the relevant authorities of the Member States of the European Union and other organizations contributing data, but will not be available to other parties.

(e) Creation of UPOV Codes for “New” Species in the Database

UPOV is responsible for the creation and maintenance of UPOV codes and will develop a procedure for the introduction and maintenance of codes in a timely way.

112. A representative of the EU explained the background to the development of the CPVO database and confirmed that the purpose of the database was to allow the checking of variety denominations. It was expected that a prototype of the CPVO database would be prepared for testing in Autumn 2004 and would be operational in 2005. He confirmed that as a part of the cooperation with UPOV, and subject to the agreement of the countries and owners of other registers concerned, the CPVO is to be responsible for collecting variety denomination data for all official registers kept by authorities of the Member States of the European Union, official registers kept by authorities of the European Economic Area (EEA) and Switzerland, the European Union Common Catalogues and other relevant registers, such as the Dutch database PLANTSCOPE.

113. The Delegation of Mexico welcomed the program of cooperation between UPOV and CPVO and particularly welcomed the development of a simplified format for contributing data to the UPOV Plant Variety Database as a means of obtaining data from countries, such as Mexico, which did not currently contribute data.

114. The representative of ISF appreciated the development of a web-based version of the UPOV Plant Variety Database and, in response to his concern, was reassured by the Office

that there would be compatibility between the UPOV-ROM and web-based versions of the UPOV Plant Variety Database.

115. The Delegation of Kenya considered that making information exclusively web-based might create problems for some existing and future members of the Union.

116. The Office explained that it would consult the members of the Union before taking any steps to discontinue the availability of the UPOV-ROM version of the Plant Variety Database. The Office also confirmed that the information which is currently provided in the UPOV-ROM would also be provided with the web-based version.

117. The Delegation of the United Kingdom agreed that the UPOV-ROM should continue to be provided for the time being and considered that developing a simplified format for contributing data would minimize the need for manual inputting of data.

118. The Delegation of Denmark considered that future development of the Plant Variety Database should be focussed on the web-based format and was open to possibilities to help in the manual inputting of missing data, depending on the volume which would be involved.

119. The Delegation of Argentina welcomed the document and the development of a simplified format for contributing data to the UPOV Plant Variety Database as a means of obtaining more complete data from countries, such as Argentina, which was not able to contribute data on a regular basis. It agreed that links to other websites with relevant information on variety denominations might be useful. With regard to the continuation of the UPOV-ROM alongside the web-based version of the Plant Variety Database, it considered that this might lead to a duplication of resources and suggested that efforts should be concentrated on the web-based version.

120. The Delegation of Germany welcomed the initiatives and the progress which had already been made. It noted that it would not be practical to try to develop a universal search tool for testing variety denominations across different territories.

121. The Delegation of France explained that it was very satisfied with the developments, particularly concerning the cooperation with the CPVO. It appreciated the fact that it would only have to submit its data once, to the CPVO, and the CPVO would then forward the data to UPOV. In that respect it noted that the data on the UPOV Plant Variety Database concerned more than just variety denomination data and encouraged the use of simple tools for transferring all such data.

122. The Delegation of Australia wondered to what extent the Plant Variety Database might be extended to include data on non-protected varieties. The Office clarified that the Plant Variety Database already contained information on non-protected varieties, including, in particular, those included in national variety registers. It was considered that the extent to which data from wider sources should be included would need to be carefully considered on a case-by-case basis within UPOV, and it was noted that it was proposed to consider links to other sources as an alternative to incorporating data within the Plant Variety Database.

*123. The TC noted the information concerning the development of the Web-based Plant Variety Database, as set out in paragraphs 18 to 39 of document TC/40/6-CAJ/49/4. It welcomed the program of cooperation between UPOV and the Community Plant Variety

Office (CPVO) in the development of software and maintenance of data concerning their respective databases.

*124. The TC noted that the Office would present an initial prototype of its Web-based Plant Variety Database at the forty-first session of the TC in 2005, together with proposals concerning the fields to be included and proposals for which fields might be considered to be mandatory. The TC considered that the matter of frequency of updating of the Web-based Plant Variety Database should be considered in conjunction with the presentation of the prototype and that consideration of the establishment of links to relevant Websites for variety denomination checking purposes could also be considered at that time.

*125. With regard to the proposal for manual inputting of data from printed gazettes, the TC noted that improving the ease of contributing data was likely to increase the number of countries contributing data and that it would be appropriate to assess the need for manual input of data at a later stage.

UPOV-ROM

*126. The TC agreed that, in the light of developments concerning a Web-based Plant Variety Database, the planned short-term improvements to the UPOV-ROM should not be pursued. However, it agreed that training for the purposes of contributing data to the Plant Variety Database and for its use should go ahead. The TC noted that the UPOV-ROM would continue to be produced on the current basis and noted that, for some users, a CD-ROM media may offer advantages compared to a Web-based system. The Office confirmed that it would not discontinue production of the CD-ROM without further consultation.

GENIE Database

*127. The TC noted the report on the development of the GENIE database and noted that the document TC/40/4 “List of species in which practical knowledge has been acquired or for which national test guidelines have been established” had been produced from the GENIE database.

Publication of Variety Descriptions

*128. Discussions were based on document TC/40/7.

*129. The TC welcomed the proposals concerning work on the model studies. It agreed a model study on *Alstroemeria* and that a model study on rose should not be pursued at present.

*130. The TC recommended that the following initial guidance for the Coordinators of the model studies, developed by the TWC, in conjunction with Mr. Gerhard Deneken (Denmark), should be followed as far as possible:

(a) where practically possible, the study should be conducted on all characteristics included in the UPOV Test Guidelines;

(b) contributors of variety descriptions should be requested to provide their “official” descriptions of the varieties concerned, i.e. the description resulting from the DUS examination of the variety. In making this recommendation, it noted that the description

may have been re-calibrated in the meantime, but considered that, if such changes could not be accommodated in the comparison of variety descriptions, the aims of the project could not be met;

(c) in the case of authorities wishing to contribute variety descriptions for which they did not have “official” descriptions, e.g. for varieties which had been acquired for their reference collections, the description to be provided should be that produced at the end of the first complete cycle of testing in which the variety was included;

(d) contributors should be requested to specify the reference of the UPOV Test Guidelines on which the description had been developed; and

(e) contributors should be requested to provide the variety denomination, breeder’s reference, breeder and applicant for each variety to verify, as far as possible, whether varieties were the same or different.

*131. The TC agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety and communicate this guidance to the coordinators of the model studies via the Office.

*132. The TC noted the developments in the CAJ and the *Ad hoc* Working Group on Publication of Variety Descriptions (WG-PVD).

Preparatory Workshops

*133. The TC considered document TC/40/8.

134. The representative of the Food and Agriculture Organization of the United Nations (FAO) congratulated UPOV for its approach to training. In the experience of FAO in its technical and capacity-building workshops in seed and varietal testing and in genetically modified seed detection methods and analysis, it had become apparent that more and more sophisticated techniques were being used, and it was important to be able to provide the necessary training in these techniques. In that respect, the TC was informed that the FAO would be holding its fourth electrophoretic and DNA-based methods varietal verification workshop in Slovenia in July 2004. The representative explained that FAO would be very pleased to collaborate with UPOV in such capacity-building workshops.

*135. The TC noted the report of the preparatory workshops, held in 2003, and agreed to the program for 2004, as set out in document TC/40/8, paragraph 5.

Molecular Techniques

*136. The TC considered document TC/40/9.

137. The Delegation of Australia noted that the wording of the second sentence of paragraph 2.1.1 implied, to some extent, that the breeder-testing system was an exception to the normal situation and proposed that it should be reworded to read: “The examination, or “DUS Test”, may be based on growing tests, carried out by the authority competent for

granting plant breeders' rights, or by separate institutions, such as public research institutes, acting on behalf of that authority or, on the basis of growing tests carried out by the breeder.”

138. A representative of the EU noted that Appendix 1 to document TC/40/9 stated that one of the roles of the BMT was to “provide a forum for discussion on the use of biochemical and molecular techniques in the consideration of essential derivation and variety identification”, whilst noting that the consensus reached in the CAJ at its forty-fourth session, held in Geneva from October 22 and 23, 2001, was that it was not appropriate, at that time, for UPOV to make recommendations on variety identification (see document CAJ/44/9, paragraph 68). He considered that it would be very useful to explore the possibilities to use molecular markers for variety identification and technical verification of protected varieties. He reported that there were a number of PBR title holders in Europe who were using molecular markers in their enforcement action and suggested that it would be useful to develop some guidelines, rules or methods in this area.

139. The Delegation of the United Kingdom presented a proposal for redrafting of section 3 of the Annex to document TC/40/9. That proposal is reproduced as Annex II to this document (TC/40/11 Prov.), with proposed deletions to the original text shown in strikethrough text and proposed additions shown by underlining.

140. The representative of the International Seed Federation (ISF) considered that, in paragraph 3.2.1 of the proposal, the use of the term “distinguishing” could be confused with distinctness and could be misleading by implying that DNA-profiling could be used for distinctness. A representative of the EU supported the concerns expressed by ISF.

141. The Delegation of France considered that section 3 was too simplified and did not adequately reflect UPOV's work in that area. It considered that it would be better to have a shorter section and to use a bibliography to provide an appropriate summary of UPOV's work.

142. The Delegation of the United Kingdom recalled that, at the last session of the TC, it had expressed its doubts about the need for a document. However, having seen the document it considered that it provided a valuable overview of the current situation in UPOV. With this in mind, it did not consider that section 3 was a particularly important element.

143. The representative of ISF noted that section 3 was the only original part of the document and had concerns with the content. He did not consider that a list of techniques was useful. However, he recalled that the BMT had identified an urgent need to harmonize methodologies and had asked the Office to prepare a document on that matter. In that regard, ISF had sent the Office a draft list of items to discuss in relation to the use of molecular techniques in variety characterization.

144. The Office confirmed that a draft document containing guidelines for molecular marker selection and database construction (“BMT guidelines”) would be prepared in time for discussion by the TWPs at their sessions in 2004.

145. The Chairman of the BMT agreed with the view of the Delegation of the United Kingdom and suggested that section 3 should provide at least an explanation of polymorphism.

146. The Delegation of France considered that it was necessary to explain the developments in the TWPs and the BMT. It reiterated that the current draft of section 3 was not a useful or appropriate summary and that it had a preference for a bibliography. Furthermore, it suggested that section 4 should provide a review of ongoing developments and discussions within UPOV.

147. The Delegation of Germany explained that it had found the document to be a very helpful summary, but considered that section 3 was too general and did not reflect the progress in the Crop Subgroups. It considered that a separate document for the TWPs and the BMT would be more appropriate to summarize that progress.

148. The Chairman of the BMT informed the TC that the possibility of a review of ongoing developments and discussions within UPOV within section 4 had been considered when developing the document. However, it had been decided to adhere closely to the currently agreed position within UPOV.

149. The Chairman noted that the comments indicated that the deletion of section 3 might allow the document to be accepted.

150. The Delegation of the United Kingdom agreed with the deletion of section 3 and proposed that a reference might be made to a separate document.

151. The representative of the EU agreed with the deletion of section 3.

152. The Delegation of France agreed with the deletion of section 3 and considered that a cross-reference to another document would be a good idea. It suggested that the other document should concentrate on techniques which were known to be suitable and, in particular, micro-satellites, rather than addressing techniques which were known not to be suitable. With regard to section 4, it considered that new points in relation to variety identification should be included, providing examples of how molecular techniques might be used, for example, in relation to the checking of reference samples and hybrid varieties. It considered that the conclusion on Option 3 was not clearly drafted and suggested to state that Option 3 was not recommended on the basis that there were differences of opinion on that option. With regard to Option 2, it noted that discussions in the BMT had emphasized that more work was needed on larger collections of varieties.

153. The Vice Secretary-General recalled that the purpose of the document was to present the current situation within UPOV and proposed that the document should not seek to go beyond that point. He observed that the possible use of molecular techniques in relation to variety identification was raised more often and reminded the TC of the most recent discussion of the CAJ on this matter and presented the following extract from the report of the forty-fourth session of the CAJ, held in Geneva from October 22 and 23, 2001 (document CAJ/44/9):

“66. Several delegations and the representatives of the European Community and ASSINSEL considered that it fell outside the competence of UPOV to make recommendations on variety identification. However, the Delegation of Chile wondered which would be the competent international body for studying biochemical and molecular techniques.

"67. In response to the concern raised by the Delegation of Chile, the Vice Secretary-General clarified that the work carried out by the Working Group on Biochemical and Molecular

Techniques and DNA-Profiling in Particular (BMT) on molecular markers and the assessment of their suitability for examination of distinctness, uniformity and stability (DUS) would continue.

"68. The Chair summarized that the general consensus of the Committee was that it was not appropriate, at this time, for UPOV to make recommendations on variety identification."

154. The Vice Secretary-General wondered if the time had now come to review the situation. However, he proposed that consideration of this matter should be related to the enforcement of plant breeders' rights, since this was within the scope of the UPOV Convention. With regard to how this matter might be taken forward, he suggested that the CAJ might be invited to consider the issues and to refer the matter to the BMT Review Group.

155. A representative of the EU welcomed the proposal of the Vice Secretary-General. He added that any consideration should be related to protected varieties which would have been established as distinct, uniform and stable on the basis of existing phenotypic characteristics. He further proposed that matters concerning technical verification of the existence of varieties for PBR purposes should be included, since these fell within the remit of PBR authorities.

156. The representative of ISF agreed with the approach proposed by the Vice Secretary-General.

157. The Delegation of the Netherlands noted that the International Seed Testing Association (ISTA) had a variety committee working on variety identification using molecular techniques and expressed the need to avoid duplication of work in this area.

158. The Delegation of France recalled that, since the forty-fourth session of the CAJ, the BMT Review Group had developed its recommendations and that these had been endorsed by the TC and the CAJ. This development had cleared the way to re-open discussions in relation to variety identification. The delegation noted that breeders were already using molecular techniques in relation to variety identification. With regard to the work in ISTA, the delegation considered that UPOV would make a contribution by addressing the matter of variety identification.

159. The Delegation of the Netherlands noted that, with respect to document TC/40/9, it would be preferable to have a clearer conclusion on Option 3 and preferred to add information with regard to the use of molecular techniques in relation to variety identification.

160. The Delegation of Argentina agreed that section 3 should be deleted and expressed satisfaction with respect to section 4 as presented in document TC/40/9.

161. The Chairman observed that it was unlikely that it would be possible to provide further clarity with regard to Option 3, or with regard to the use of molecular techniques in relation to variety identification at that time.

162. In conclusion, the TC agreed that Section 3 of the Annex to document TC/40/9 should be deleted and that reference to that section should be removed from the remaining sections. A separate document would be developed to address molecular techniques. The proposed modifications to Section 3 of the Annex to document TC/40/9 which had been suggested by the UK Delegation, reproduced as Annex II to this document, were therefore set aside and were not discussed further. The TC further agreed that the second sentence of Section 2.1.1

should be amended to read “The examination, or “DUS Test”, may be based on growing tests, carried out by the authority competent for granting plant breeders’ rights, or by separate institutions, such as public research institutes, acting on behalf of that authority or, on the basis of growing tests carried out by the breeder.” On that basis, the TC agreed that the Annex to document TC/40/9 would be a suitable summary of the current UPOV position and proposed that the CAJ be invited to examine the document for that purpose.

163. The representative of ISF considered that, in the same way as for variety identification, it might be appropriate to use the knowledge and expertise of UPOV to develop guidelines to have good characterization of varieties in order to help the enforcement of PBR including in relation to essentially derived varieties. It was emphasized that this should not be seen as a move for an authority to make the decision on whether a variety was essentially derived or not.

*164. The TC agreed to propose to the CAJ that it consider the possible use of molecular tools for variety characterization in relation to the enforcement of plant breeders’ rights, technical verification and the consideration of essential derivation. In that respect, it proposed that these might be matters relevant for consideration by the BMT Review Group. The TC noted that work concerning the use of molecular tools for variety characterization was being undertaken by the International Seed Testing Association (ISTA).

Test Guidelines

*165. The TC considered and adopted the following Test Guidelines on the basis of the amendments as specified in Annex III to this document and the linguistic changes recommended by the Enlarged Editorial Committee:

| <i>Document</i> | <i>Anglais</i> | <i>Français</i> | <i>Allemand</i> | <i>Espagnol</i> | <i>Latin</i> |
|------------------|---------------------------------------|--------------------------------------|--|---|--|
| TG/13/9(proj.1) | Lettuce | Laitue | Salat | Lechuga | <i>Lactuca sativa</i> L. |
| TG/16/8(proj.3) | Rice | Riz | Reis | Arroz | <i>Oryza sativa</i> L. |
| TG/23/6(proj.3) | Potato | Pomme de terre | Kartoffel | Papa, Patata | <i>Solanum tuberosum</i> L., <i>S. tuberosum</i> L. <i>sensu lato</i> |
| TG/48/7(proj.3) | Cabbage | Chou pommé | Kopfkohl | Col repollo | <i>Brassica oleracea</i> L. |
| TG/49/7(proj.3) | Carrot | Carotte | Möhre | Zanahoria | <i>Daucus carota</i> L. |
| TG/54/7(proj.3) | Brussels Sprout | Chou de Bruxelles | Rosenkohl | Col de Bruselas | <i>Brassica oleracea</i> L. var. <i>gemmifera</i> DC. |
| TG/66/4(proj.5) | White Lupin, Blue Lupin, Yellow Lupin | Lupin blanc, Lupin bleu, Lupin jaune | Weißer Lupine, Blaue Lupine, Gelber Lupine | Altramuz blanco, Altramuz azul, Altramuz amarillo | <i>Lupinus albus</i> L., <i>L. angustifolius</i> L., <i>L. luteus</i> L. |
| TG/90/6(proj.2) | Curly Kale | Chou frisé | Grünkohl | Col rizada | <i>Brassica oleracea</i> L. var. <i>sabellica</i> L. |
| TG/92/4(proj.4) | Persimmon | Plaqueminier | Kakipflaume | Caqui, Kaki | <i>Diospyros kaki</i> L. |
| TG/102/4(proj.1) | Busy Lizzie | Impatience | Fleißiges Lieschen | Alegria | <i>Impatiens walleriana</i> Hook. f. |
| TG/106/4(proj.3) | Leaf Beet | Poirée | Mangold | Acelga | <i>Beta vulgaris</i> L. var. <i>vulgaris</i> L. |

| <i>Document</i> | <i>Anglais</i> | <i>Français</i> | <i>Allemand</i> | <i>Espagnol</i> | <i>Latin</i> |
|--------------------|--|--|--|--|--|
| TG/142/4(proj.3) | Watermelon | Pastèque | Wassermelone | Sandía | <i>Citrullus lanatus</i> (Thunb.) Matsum. et Nakai |
| TG/CLEMAT(proj.3) | Clematis | Clématite | Waldrebe | Clemátide | <i>Clematis</i> L. |
| TG/CPEAR(proj.3) | Cactus Pear - Xoconostles | Figuier de Barbarie - Xoconostles | Feigenkaktus – Xoconostles | Chumbera, Tuna – Xoconostles | <i>Opuntia</i> , Groups 1 & 2 |
| TG/CATHAR(proj.3) | Catharanthus | Pervenche de Madagascar | Zimmerimmergrün | Vinca pervinca | <i>Catharanthus roseus</i> (L.) G. Don |
| TG/PARSNIP(proj.2) | Parsnip | Panais | Pastinake | Chirivía | <i>Pastinaca sativa</i> L. |
| TG/HYPERI(proj.3) | <i>Hypericum hircinum</i> L., <i>H. androsaemum</i> L., <i>H. x inodorum</i> Mill. | <i>Hypericum hircinum</i> L., <i>H. androsaemum</i> L., <i>H. x inodorum</i> Mill. | <i>Hypericum hircinum</i> L., <i>H. androsaemum</i> L., <i>H. x inodorum</i> Mill. | <i>Hypericum hircinum</i> L., <i>H. androsaemum</i> L., <i>H. x inodorum</i> Mill. | <i>Hypericum hircinum</i> L., <i>H. androsaemum</i> L., <i>H. x inodorum</i> Mill. |
| TG/PERILLA(proj.3) | Perilla | Pérille | Perilla | Perilla | <i>Perilla frutescens</i> (L.) Britton var. <i>japonica</i> Hara |
| TG/VERBEN(proj.3) | Verbena | Verveine | Verbene | Verbena | <i>Verbena</i> L. |

*166. The TC noted that the proposals made by the TC-EDC in Annex III would not align the Test Guidelines, in all respects, with TGP/7 as adopted by the TC.

*167. The TC agreed to the plans for the development of new Test Guidelines and the revision of existing ones, as shown in Annex II to document TC/40/2, with the following amendments:

- (a) TWO to be indicated as an interested TWP for TG/TEA;
- (b) leading country for the drafting of TG/DIASC to be indicated as Canada;
- (c) TWA to be added to the TWP for TG for Sweetcorn. Common names in French and Spanish to be checked.
- (d) TWA/TWV to be indicated as the relevant TWPs for TG/GINSEN.

168. The Office explained that the * in Annex II of document TC/40/2 indicated that the Test Guidelines were at the “final draft” stage.

*169. The TC noted the status of the existing Test Guidelines as listed in document TC/40/2, Annex III.

List of Species in Which Practical Knowledge Has Been Acquired or for Which National Test Guidelines Have Been Established

*170. The TC considered document TC/40/4.

*171. The TC was informed that the notes indicating types of practical experience had been extended to cover new options. The TC agreed that the contributors should check the information presented in document TC/40/4 and notify any amendments to the Office by April 30, 2004. The Office would produce an updated version of the document on the basis of comments received.

Program for the Forty-First Session

*172. The following draft agenda was agreed for the forty-first session of the TC to be held in Geneva in 2005:

1. Opening of the session
2. Adoption of the agenda
3. Report on relevant matters discussed in the last sessions of the Administrative and Legal Committee, the Consultative Committee and the Council (oral report by the Vice Secretary-General)
4. Progress reports on the work of the Technical Working Parties, including the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) and Crop Subgroups
5. Matters arising from the Technical Working Parties
6. TGP documents
7. Publication of variety descriptions
8. UPOV information databases
9. Molecular techniques
10. Preparatory workshops
11. Test Guidelines
12. List of species in which practical knowledge has been acquired or for which national test guidelines have been established
13. Program for the forty-second session
14. Adoption of the report on the conclusions reached in the session (if time permits)
15. Closing of the session.

Chairman of TWA

*173. The TC noted that Mr. Carlos Gómez Etchebarne (Uruguay) had resigned his chairmanship of the TWA. The TC noted that the TWA had not had an opportunity to formulate a proposal for a new Chairman. It was, therefore, agreed that the TC should propose a new Chairman to be elected by the Council at its twenty-first extraordinary session on April 2, 2004, and decided to propose that Mr. Luis Salaices (Spain) be elected as Chairman of the TWA for the remaining term of the TWA chairmanship.

Chairperson and Vice-Chairperson

*174. The TC noted that the chairmanship of Mr. Michael Camlin (United Kingdom) would expire with the closing of the forthcoming ordinary session of the Council in October of the current year. It proposed to the Council that it elect Ms. Julia Borys (Poland) as new Chairperson and Mrs. Françoise Blouet (France) as new Vice-Chairperson of the TC for the forthcoming three-year term.

Closing of the Session

175. The Chairperson noted that Mr. John Carvill, a previous Chairman of the CAJ, would be retiring shortly and this would be his last attendance of the TC. On behalf of the TC, the Chairman thanked him for his valuable contribution to its work.

176. The Vice Secretary-General, on behalf of the TC, thanked Mr. Michael Camlin for his excellent chairmanship of the TC and awarded him a silver medal in recognition of this chairmanship.

177. The present report has been adopted by correspondence.

[Annexes follow]

ANNEXE I / ANNEX I / ANLAGE I / ANEXO I

(dans l'ordre alphabétique des noms français des États / in the alphabetical order of the French names of the States / in alphabetischer Reihenfolge der französischen Namen der Staaten / por orden alfabético de los nombres en francés de los Estados)

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[L'annexe II suit/
Annex II follows/
Anlage II folgt/
Sigue el Anexo II]

ANNEX II

REVISIONS TO DOCUMENT TC/40/9, ANNEX
PROPOSED BY THE UNITED KINGDOM

3. MOLECULAR TECHNIQUES

3.1 The Plant Genome

3.1.1 Plant DNA is located both in the nucleus and the organelles (the chloroplast and the mitochondria). The nuclear DNA content varies considerably from species to species, but can be nucleus comprises around 10^9 nucleotide base pairs (bp), compared to only around 150 kb (150,000 bp) for the chloroplast and 220-2,500kb for the mitochondria. The chloroplast and mitochondrial DNA are highly conserved and code for a relatively small number of genes.

3.1.2 The averageTypically, a gene accounts for around 4 kb. However, less than 2% of the DNA in the nucleus is in the form of genes coding for cell products and the average number of such “coding” genes is around 15,000 to 50,000. The remaining 98% of the DNA is in the form of non-coding DNA sequences. This non-coding DNA may be in the form of repetitive DNA sequences, either as tandem repeats (repeated sequences of bases, occurring one after the other) or dispersed repeats (repeated sequences, dispersed throughout the genome). The tandem repeats of non-coding DNA are known as “satellite” DNA.

3.1.3 Manyest genes are present only once in the genome and are known as “single copy genes.” In the case of diploid plants, chromosomes are present as homologous pairs with each chromosome containing its version of the gene, known as an “allele.” If the two versions of the gene, i.e. alleles, are the same the plant is “homozygous” for that gene, but if the alleles are different, the plant is “heterozygous” for that gene.

3.2 Polymorphism

3.2.1 The key to being able to use DNA for the purposes of distinguishing between or identifying individuals, including plant varieties, (i.e. DNA profiling or fingerprinting) is to detect polymorphisms at particular locations. There are essentially two approaches to the detection of these polymorphisms, based on either DNA hybridisation or DNA amplification.

3.2.2 Hybridisation approaches were the first widely applied method of DNA profiling. In these, vVariations in DNA (polymorphisms) can be are observed by cutting, or “digesting” the DNA with restriction enzymes. Restriction enzymes are able to recognize particular sequences of 4 to 6 nucleotides (restriction sites) and cut the DNA inside or near these particular sequences. Any mutation occurring at these restriction sites will render the enzyme unable to recognize and, therefore, to cut the sequence. Thus, the restriction sites will differ and different plants individuals will can yield restriction fragments (fragments of DNA obtained after the action of the restriction enzyme) with of different sizes.

3.2.3 2 Gel eElectrophoresis can be used to separate restriction fragments on a gel according to their sizes and thereby give patterns specific to each different DNA. However, nuclear DNA yields hundreds of thousands of bands of every size obtained after digestion, producing a smear on the gel. In the RFLP (Restriction Fragment Length Polymorphism) method, the fact that complementary DNA strands spontaneously associate with each other, is exploited.

A “probe,” consisting of a particular short sequence of DNA, is added to the gel and left to associate (hybridize) with the matching sequence in the smear. If the probe has been radioactively or biochemically labeled/labelled prior to the hybridization, it will be possible to locate the particular sequence of DNA in the gel. ~~The P~~probes can be of different types: genomic DNA (gDNA), complementary DNA (cDNA) or synthetic DNA sequences. ~~The probes and~~ can be used to investigate a single locus (site of a gene on a chromosome) or many loci.

~~3.2.3-4~~ The polymorphism observed with monolocus probes arises mostly from mutations in the restriction sites leading to differences in the length of the restriction fragments. ~~Conversely, M~~ multilocus probes, ~~which are generally satellite DNA, also~~ reveal another type of variability, which is due to differences in the number of repetitions of the particular sequence of DNA investigated (copy number). ~~Thus c~~ Compared to monolocus probes, multilocus probes yield more complex patterns, varying in intensity as well as in band position. ~~As such, t~~ They provide more information per gel. RFLPs; are co-dominant (i.e. all alleles are expressed) and are inherited in a Mendelian way.

~~3.2.4-3.2.5~~ Amplification-based approaches to DNA profiling utilise Another approach involves a technique known as the Polymerase Chain Reaction (PCR) whereby specific portions of the genome are amplified ~~by the polymerase enzyme~~ and can then be visualized on gels. This technique requires, firstly, that the DNA sequence of the two extremities of the specific portion of DNA are known and, secondly, in order that the polymerase enzyme can amplify the appropriate portion of DNA, two complementary sequences (forward and reverse primers) for the two extremities must be developed – an “on” switch and an “off” switch. ~~3.2.5~~ Polymorphism in the amplification products may arise either from a mutation in the sequence hybridizing with the primer or from a mutation between the two primers.

3.2.6 Some PCR-based methods (e.g. Random Amplified Polymorphic DNA (RAPD) and Amplified Fragment Length Polymorphism (AFLP)) require no preliminary information about the DNA to be amplified. Two random sequences of 10 to 20 bases are used as primers. If complementary sequences exist in the genome and if they are not too far from each other, the stretch of DNA between the primers is amplified. Sometimes numerous complementary sequences are found so that electrophoresis of the amplified fragments yields a “fingerprint” which can be highly polymorphic.

3.2.7 PCR technology is also used for investigating the polymorphism of “microsatellites” by using “microsatellite markers.” ~~Microsatellites are short sequences of 2-5 bases repeated multiple times and flanked by unique DNA. Polymorphism is generally detected as a length difference in the amplified sequence. The length difference may be very small, for example two base pairs.~~ Microsatellites are tandemly repeated DNA sequences, usually with a repeat unit of 2-4 base pairs (e.g. GA, CTT and GATA). In many species, multiple alleles have been shown to exist for some microsatellites, due to variations in the copy number of this repeat unit. Microsatellites can be analysed by PCR using specific primers, a procedure known as the sequence-tagged-site microsatellite (STMS) approach. The alleles (PCR products) can then be separated by agarose or polyacrylamide gel electrophoresis. In order to develop sequence-tagged site microsatellites, information about the sequence of the DNA flanking the microsatellite is needed. This information can sometimes be acquired from existing DNA sequence databases, but otherwise has to be obtained empirically.

3.2.8 The most abundant form of DNA polymorphism are single nucleotide polymorphisms (SNPs). These are mutations producing a change at a single base position in a DNA molecule, e.g. a change in a particular DNA sequence from ATCTG to ACCTG. From various studies in plants, there appears to be one SNP approximately every 100bp. The availability of expressed sequenced tag (EST) databases makes it possible to target SNPs to functional regions of the genomes and even to specific genes.

~~3.2.98 The most common type of genetic variations are single nucleotide polymorphisms (SNPs), which are mutations producing a change at a single base in a DNA molecule. For example, a SNP might change the DNA sequence ATCTG to ACCTG. In the future, it can be anticipated that SNPs will be increasingly can be detected using high throughput screening methods such as “gene chips” or microarrays. In such methods, several different DNA sequences are placed on a matrix (e.g. glass) and exposed to samples of plant DNA. Complementary DNA sequences, if present in the plant DNA, will hybridize to a particular sequence and can be observed by, for example, fluorescence.~~

~~3.2.9-10~~ The merits of the techniques mentioned above are influenced by the context in which the techniques are to be used. The following section considers the use of molecular techniques in the DUS examination.

[Annex III follows]

ANNEX III

AMENDMENTS TO THE UPOV DRAFT TEST GUIDELINES PRIOR TO THEIR ADOPTION AT THE FORTIETH SESSION OF THE TECHNICAL COMMITTEE

I. GENERAL RECOMMENDATIONS BY THE TC-EDC CONCERNING ALL DRAFT TEST GUIDELINES

Sect. 3.3.1/3.3.2 Title to read: "Type of observation"

TQ, Sect. 4.1.3 To read: "Discovery and development
(please state where and when discovered and how developed)"

II. AMENDMENTS TO INDIVIDUAL TEST GUIDELINES

TG/13/9(proj.1): Lettuce

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Sect. 1 and Latin name to read "*Lactuca*"
TQ, Sect. 1

Sect. 5.3 Example variety to read "Merveille des quatre saisons"

Ad. 39 The address of SNES to be updated

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/16/8(proj.3): Rice

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|---------------|--|
| Sect. 3.3.1 | Change “optimum” to “optimal” |
| Sect. 4.2.2 | To delete text between brackets for (a) and (b) |
| Sect. 5.3(c) | To read “non-prostrate varieties only” |
| Char. 1 | To have notes 1-3-5 instead of 1-2-3 |
| Char. 20 | State 2 to read: “partially male sterile” |
| Char. 34 | To propose to the leading expert to have notes 1-2-3, or, if retained as 1-3-5, to provide the wording for states 2 and 4 |
| Char. 39 | To read: “Panicle: attitude in relation to stem”, with states of expression: “upright” (1), “semi-upright” (2), “slightly drooping” (3), “strongly drooping” (4) |
| Char. 45 | To read: “Leaf: time of senescence” |
| Char. 51 & 52 | To check whether to have “glume” rather than “sterile lemma” |
| Char. 53 | To read: “(fully developed grains)” |
| Char. 56 | To propose to the leading expert to change to: “Lemma: phenol reaction” |
| Char. 57 | To propose to the leading expert to change to: “Lemma: intensity of phenol reaction” |
| Ad. 17 | Drawings to be improved |
| Ad. 20 | State 1 to read: “less than 25% male sterility.” To indicate whether the percentage refers to plants or pollen |
| Ad. 30 & 39 | Drawings to be improved |
| Ad. 51 & 52 | Illustrations to be provided |
| Ad. 62 | Paragraph 3 to be moved to the beginning of the explanation. Paragraph 2, fourth line, “ordinary rice pollen” to be replaced with “non-glutinous rice” |

TG/23/6(proj.3): Potato

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|----------|--|
| Char. 10 | Example variety to read “Sanira” instead of “Sarina” |
|----------|--|

| | |
|----------------|--|
| Char. 23 to 26 | To read “Leaflet” instead of “Leaflets” |
| Char. 31 | To delete note “d” |
| Char. 32 | Notes 1 and 9 to be deleted |
| Sect. 8.1(a) | Second paragraph to read: “The spectrum and the intensity of the light source are the most important factors for the expression of lightsprouts characteristics. This spectrum is defined by the type of lamps and the voltage used. When extremes of temperature are avoided, the influence of the temperature on the speed of development is small. A good expression of the characteristics is obtained when the lightsprouts are grown in a light-sealed cabinet at room temperature under continuous light provided by small incandescent bulbs (6V AC/0.05 A) giving an intensity of 5 to 10 lux (approximately 8 bulbs per square meter, 25-40 cm above the tubers).” |
| Section 8.3 | Title to read: “Optimal Stage of Development for the Assessment of Characteristics” |
| TQ | To insert Section 4.2 as follows: “4.2 Method of propagating the variety: “4.2.1 Vegetative propagation “(a) tuber [] “(b) other (state method) [] “4.2.2 Other [] please provide details” |

TG/48/7(proj.3): Cabbage

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

| | |
|------------|--|
| Cover page | To read: “CABBAGE (<i>Brassica oleracea</i> L.: <i>Brassica</i> (White Cabbage Group); <i>Brassica</i> (Savoy Cabbage Group); <i>Brassica</i> (Red Cabbage Group))” Under Alternative Names: To delete first line |
| Sect. 1 | To read: “These Test Guidelines apply to all varieties of <i>Brassica oleracea</i> L.: <i>Brassica</i> (White Cabbage Group) {formerly <i>Brassica oleracea</i> var. <i>alba</i> DC.}; <i>Brassica</i> (Savoy Cabbage Group) {formerly <i>Brassica oleracea</i> var. <i>sabauda</i> DC.}; and <i>Brassica</i> (Red Cabbage Group) {formerly <i>Brassica oleracea</i> var. <i>rubra</i> DC.}; including all hybrids between <i>Brassica oleracea</i> var. <i>alba</i> DC., <i>Brassica oleracea</i> var. <i>sabauda</i> DC. and <i>Brassica oleracea</i> var. <i>rubra</i> DC., as these hybrids are now included in <i>Brassica</i> (White Cabbage Group), <i>Brassica</i> (Savoy Cabbage Group) and <i>Brassica</i> (Red Cabbage Group).” |
| Sect. 7 | To put (W) or (S) or (R) after each example variety |
| Char. 6 | State 1 to read “elliptic”, state 2 to read “obovate” |
| Char. 11 | Example variety for state 4 to read: “Market Pride (W)” |

| | |
|----------|--|
| Char. 28 | Example variety for state 4 to read: “Langedijker Herfst (R)” |
| Char. 32 | States to read: “short” (3), “medium” (5), “long” (7). To add (+) and provide ratios in Section 8. |

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|----------------------------------|--|
| Cover page: Alternative Names | To read in English: “Cabbage, White Cabbage” |
|----------------------------------|--|

TG/49/7(proj.3): Carrot

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

| | |
|-------------|---|
| Cover page | Latin Name to read: “ <i>Daucus carota</i> L.” |
| Sect. 4.2.2 | Title to read: “Single cross hybrids and inbred lines” First phrase to read: “For the assessment of uniformity of single cross hybrids and inbred lines, a population standard of 2% and an acceptance probability of at least 95% should be applied.” |
| Sect. 4.3.3 | To insert: “Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.” |
| Char. 1 | Notes to be amended to 3-5-7 |
| Char. 12 | To read: “Root tip (when fully developed).” States 2 and 3 to read: “slightly pointed” (2), “strongly pointed” (3). Example variety for state 2 to read: “Mello Yello.” To be indicated as PQ |
| Char. 25 | Example variety for state 9 to read: “Blanche à collet Vert hors terre” |

Ad. 27 & 28 After Ad. 27 to read:

“Ad. 28: Root: time of coloration of tip in longitudinal section

“The earliness of carrot varieties can be judged according to two criteria, characteristic 27, time of development of “rounded tip” for the varieties with a blunt tip at maturity and characteristic 28, time of coloration of the tip in longitudinal section.

“Three weeks before the normal maturity date of the varieties (where the variety ‘Touchon’ has a blunt tip): pull up of part of the test roots in order to judge the shape of the tip, characteristic 27 (early: blunt tip: variety ‘Touchon,’ medium: varieties ‘Tiana,’ ‘Nantaise améliorée 2,’ ‘Nantaise améliorée 3,’ late: pointed tip: varieties ‘Bureau,’ ‘Tancar,’ ‘Nantaise améliorée 7’).

“Following longitudinal cutting of the roots: examination of the coloration of the tip, characteristic 28 (early: colored tip: varieties ‘Amsterdam 2,’ ‘Amsterdam 3,’ late: whitish tip: varieties ‘De Colmar à coeur rouge 2,’ ‘Touchon’).

“A good example is the variety ‘Touchon’ which is early for characteristic 27 and late for characteristic 28.”

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/54/7(proj.3): Brussels Sprout

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Cover page Latin name to read: “*Brassica oleracea* L. var. *gemmifera* DC.”

Table of Contents To include Sect. 3.4

Char. 8 States 3 and 7 to read: moderately convex (3), moderately concave (7)

Char. 12 States 3 and 7 to read: moderately shorter (3), moderately longer (7)

TQ, Sect. 5.3 & 5.6 To insert example varieties

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/66/4(proj.5): White Lupin, Blue Lupin, Yellow Lupin

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

| | |
|-------------|------------------------------------|
| Char. 4 | To delete state 9 |
| Char. 7 | To delete states 1 and 9 |
| Char. 8 | To delete states 1 and 9 |
| Char. 13 | To delete state 9 |
| Char. 14 | To delete states 1 and 9 |
| Char. 20 | To delete state 1 |
| Char. 21 | To delete states 1 and 9 |
| TQ, Sect. 6 | Reference to example to be deleted |

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/90/6(proj.2): Curly Kale

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

| | |
|-------------------|---|
| Cover page | To correct “TG/1/2” to “TG/1/3” |
| Chap. III, par. 3 | Third sentence to start with “As a minimum, ...” |
| Char. 1 | Example variety to read: “Niedriger grüner krauser” and to be corrected throughout the document |
| Char. 14 | To delete “on” |
| TQ, Sect. 7.2 | To be deleted |

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/92/4(proj.4): Persimmon

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

| | |
|----------------------|--|
| Chars. 37, 39, 48 | To replace " <u>Varieties which are always or sometimes non-astringent only:</u> " with " <u>Varieties with astringency always absent or sometimes present only:</u> " |
| Chars. 38, 40, 49 | To replace " <u>Varieties which are always astringent only:</u> " with " <u>Varieties with astringency always present only:</u> ". |
| Char. 41 | To have the states: "always absent" (1), "sometimes present" (2), "always present" (3), with the example varieties: "Atago, Saijo" (1), "Zenjimaru" (2), "Fuyu, Jiro" (3). (+) to be added |
| Char. 50 | To be deleted. Leading expert notes that this characteristic does not apply to all varieties and that some varieties do not need hand-pollination. |
| Char. 51 | To be deleted (see char. 50.) |
| Char. 52 (New 50) | To have the following example varieties: "Fuyu, Goshu, Jiro" (1); "Nishimurawase, Shogatsu" (2), "Aizumishirazu, Atago, Koshuhyakume, Saijo" (3). |
| Char. 53 | To be deleted (color change is determined by the presence of brown specks in the flesh – characteristic 41) |
| Ad. 41 | To read: "For some varieties the presence of brown specks in the flesh is not consistent (state 2). For those varieties the presence and number of seeds influence the presence of brown specks (see also 8.3 Classification of Persimmon)." |
| Ad. 50 | To be deleted. |
| Ad. 52 (New 50) | To read: "For some varieties astringency is not consistent (state 2). For those varieties the presence and number of seeds determine astringency (see also 8.3 Classification of Persimmon)." |
| Ad. 53 | To be deleted |

Sect. 8 New Section (8.3) to be added as follows:

8.3 *Classification of Persimmon*

Varieties of Persimmon can be classified into Pollination Constant (PC) and Pollination Variant (PV) types as follows (see characteristic 52 (New 50)):

(A = Astringent; NA = Non-Astringent)

PC (Pollination Constant) varieties:

- are always astringent or always not astringent;
- have brown specks always present in the flesh or always absent.

PV (Pollination Variant) varieties:

- are always astringent or sometimes astringent (depending on the presence and number of seeds);
- sometimes have brown specks in the flesh (depending on the presence and number of seeds). PV Astringent (PVA) varieties only have brown specks around the seed. PV Non Astringent (PVNA) varieties have brown specks around the seed and sometimes these extend over a wide area of flesh (depending on the number of seeds).

This classification is explained in relation to the states of expression of certain characteristics in the Table of Characteristics in Table 1. Table 2 presents a classification on the basis of a combination of pollination types (PC/PV) and astringency types (A/NA). Table 3 presents the example varieties according to the classification provided in Table 2.

Table 1: Classification of Persimmon Varieties in Relation to States of Expression for Characteristics 41 and 52 (New 50)

| | State 1 (always absent) | State 2 (sometimes present) | State 3 (always present) |
|--|----------------------------|--------------------------------|-----------------------------|
| Char. 41 Fruit: presence of brown speck | PCA | PVA PVNA | PCNA |
| Char. 52. (New 50) Fruit: astringency | PCNA | PVNA | PVA PCA |

Table 2: Classification of Persimmon Varieties on the Basis of a Combination of Pollination Types (PC/PV) and Astringency Types (A/NA)

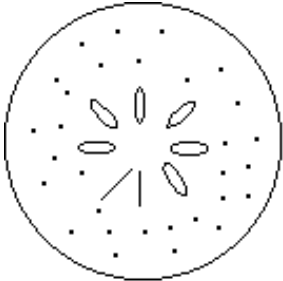
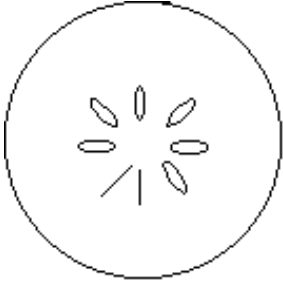
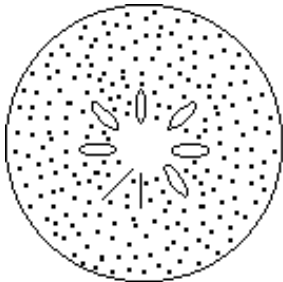
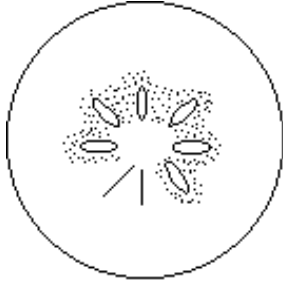
| Class | Cross-section | Features |
|-------|---|--|
| PCNA |  | Always non-astringent at maturity. Always have small number of brown specks in flesh. |
| PCA |  | Always astringent at maturity. Never have brown specks in flesh. |
| PVNA |  | Sometimes non-astringent at maturity. Brown specks around seeds and sometimes over a wide area of flesh (the area depends on numbers of seeds). |
| PVA |  | Always astringent at maturity. Brown specks around seeds. |

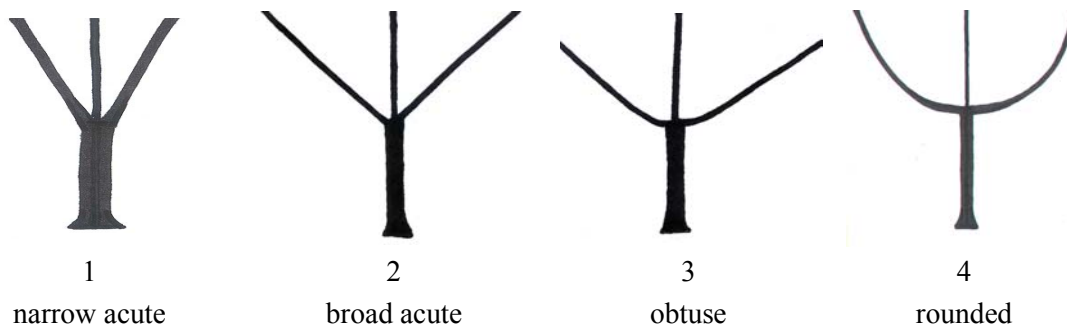
Table 3: Classification of Example Varieties

| Example Varieties | Type | Example Varieties | Type |
|---------------------|------|-------------------|------|
| Aizumishirazu | PVA | Kubogataobishi | PVNA |
| Akagaki | PVNA | Kurogaki | PVNA |
| Amahyakume | PVNA | Maekawajiro | PCNA |
| Akoumankaki | PVNA | Meotogaki | PCA |
| Anzai | PVNA | Mercatelli | PVNA |
| Atago | PCA | Mikatanigosho | PVNA |
| Costata | PCA | Mizushima | PVNA |
| Damopan | PCA | Moriya | PCA |
| Dojohachiya | PCA | Naganogoshi | PVNA |
| Eboshi | PCA | Nishimurawase | PVNA |
| Farmacista Honorati | PCA | Obishi | PVNA |
| Fudegaki | PVNA | Ogoshi | PCNA |
| Fujiwaragosho | PCNA | Okugoshi | PCA |
| Fuyu | PCNA | Oshorokaki | PVNA |
| Gionbo | PCA | Saijo | PCA |
| Gosho | PCNA | Shakokushi | PCA |
| Hanagosho | PCNA | Sanja | PCA |
| Hana – fuyu | PCNA | Shogatsu | PVNA |
| Hazegosho | PCNA | Square | PCA |
| Hiratanenashi | PVA | Suruga | PCNA |
| Hoshomaru | PVA | Takura | PCA |
| Ichidagaki | PCA | Toyoka | PVNA |
| Izu | PCNA | Tsurunohashi | PCA |
| Jiro | PCNA | Yamato | PCA |
| Tipo | PVNA | Yokono | PCA |
| Koshuhyakume | PVA | Yotsumizo | PCA |
| Kubo | PVNA | Zenjimaruru | PVNA |

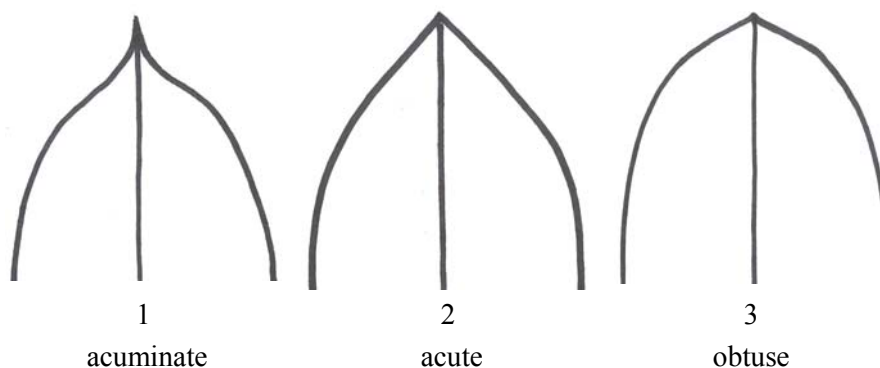
(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|---------------|---|
| Char. 46 | To delete: “ <u>Female flower only</u> ” |
| Char. 50 | To delete note (d) |
| Sect. 8.1(a) | Last sentence to read: “Observations on the one-year-old shoot should be made on the middle third of the shoot.” |
| Ad. 14 and 15 | To be checked with the leading expert if it would be appropriate to replace them with the drawings provided by the TC-EDC as follows: |

Ad. 14: Leaf blade: shape of base



Ad. 15: Leaf blade: shape of apex



Ad. 38, 40, 49 Leading expert to clarify what “in air” means

Ad. 41 To replace “not consistent” with “pollination variant”

TG/102/4(proj.1): Busy Lizzie

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

Sect. 2.3 Last line to read: “for seed propagated varieties: 1 g. seed.”

Sect. 5.3 Group 9 to be deleted.

| | |
|----------------|---|
| Ad. 17 and 21: | Drawing for state 9 to be amended such that the arrow indicates the eye zone correctly. |
| TQ, Sect. 5 | To insert: “5.5(ii) Flower: main color” after the RHS Colour Chart line |

TG/106/4(proj.3): Leaf Beet

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|---|---|
| Cover page: Box | Latin name to be changed to: “ <i>Beta vulgaris</i> L. var. <i>cicla</i> L. Ulrich” |
| Cover page: Alternative names/ Section 1 | Position of “ <i>Beta vulgaris</i> L. var. <i>vulgaris</i> L.” and “ <i>Beta vulgaris</i> L. var. <i>cicla</i> L. (Ulrich)” to be reversed. |
| Sect. 4.2.2 | To be deleted |
| Sect. 4.2.3 | Last sentence to be deleted |
| Sect. 4.3.3 | To be added as follows: “Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.” |
| Char. 3 | State 7 to read “long” |
| Char. 5 & 6 | To delete VS |
| Char. 6 | To correct spelling of example variety to: “Verte à carde blanche” (and check throughout the document) |
| TQ | Following text to be added after “TECHNICAL QUESTIONNAIRE”: “In the case of hybrid varieties which are the subject of an application for plant breeders’ rights, and where the parent lines are to be submitted as a part of the examination of the hybrid variety, this Technical Questionnaire should be completed for each of the parent lines, in addition to being completed for the hybrid variety.” |

TG/142/4(proj.3): Watermelon

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

(c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|----------------|--|
| Cover page | Under Alternative Names, Latin, to add: " <i>Citrullus vulgaris</i> Schrad." |
| Sect. 3.4.1 | To read: "... in the open <u>or</u> 20 plants ..." |
| Char. 1 | Notes to read: 2-3 |
| Char. 2 | To be indicated as PQ instead of QN To read: "Cotyledon: shape" with the states of expression: "narrow elliptic" (1), "medium elliptic" (2), "broad elliptic" (3) |
| Char 3 | To read: "Cotyledon: size" |
| Char. 4 | To read: "Cotyledon: intensity of green color" |
| Char. 5 | To read: "Cotyledon: spots" |
| Char. 12 & 13 | In English to read: "Leaf blade" instead of "Leaf" |
| Char. 29 | To read: "Fruit: degree of grooving" |
| Char. 32 | To delete: " <u>Only varieties with stripes.</u> " |
| Char. 44 | To delete states 1 and 9 |
| Ad. 24, 26, 43 | Drawings to be improved |
| Ad. 49 | Leading expert to provide method of inoculation for the Section "Under Execution of Test" |

TG/CATHAR(proj.3): Catharanthus

(a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

(b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|--------------|--|
| Sect. 2.3 | Second line to read: “seed-propagated varieties: 600 seeds” |
| Sect. 5.3(b) | To delete: “Gr. 5: other color” |
| Char. 7 | (+) to be added. Illustration to be provided. |
| Char. 19 | To read: “ <u>Varieties with one color of eye zone only</u> :” |

TG/CLEMAT(proj.3): Clematis

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|--------------------|---|
| Cover page: Box | Brackets to be added to read: “(Clematis L.)” |
| Char. 2 | Heading to be reworded to: “Plant: type” |
| Char. 27 | To add: “Flower:” before “cross section in lateral view” |
| Char 28 & 29 | To add note (e) |
| Char. 36 | To read: “ <u>Only varieties with non-rotate flowers</u> : Sepal: reflexing of apex” |
| Sect. 8.1 | Paragraphs (e) and (d) to be reversed |
| TQ, Sect. 5.7 | To insert: “(ii) Sepal: main color of upper side” followed by the RHS Colour Chart indication |

TG/CPEAR(proj.3): Cactus Pear

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

Cover page: To read: “(Opuntia, Groups 1 & 2)”
Box

Cover page, Spelling to be amended to: “Xoconostles”
Alternative Names
& Headers

Sect. 3.5 To read: “Unless otherwise indicated, all observations should be made on 5 plants or parts taken from each of 5 plants. In the case of parts of plants, the number to be taken from each of the plants should be 2. In the case of fruit characteristics, the observations should be made on 20 fruits.”

Char. 7 States 1, 2, 3 and 7 to be amended to: “narrow elliptic” (1), “medium elliptic” (2), “broad elliptic” (3), “broad obovate” (7)

Char. 10 State 5 to read: “medium”

Char. 26 To be checked with the leading expert whether “presence” should be replaced by “number” and state 1 to read “none or very few”

Char. 37 To read: “Fruit: shape in longitudinal section”

Char. 42 Notes to be amended to: 1-2-3

Char. 48 To read: “Fruit: evenness of color of surface”

Char. 55 To read: “Fruit: number of abortive seeds”. State 1 to be amended to “none or very few”

TQ, Sect. 1.1 1 To delete “if known”
and 1.1.2

TG/PARSNIP(proj.2): Parsnip

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

None

TG/HYPERI(proj.3): *Hypericum hircinum* L., *H. androsaemum* L., *H. x inodorum* Mill.

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

Char. 17 To be deleted

Char. 27 To be deleted

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

Cover page & Sect. 1 Font style of “x” to be amended to read: “*Hypericum x inodorum* Mill.”

Sect. 2.3 To delete: “young” in the second line

Sect. 3.3.2 To be deleted

Char. 4 To replace: “years’s” with “year’s”

Char. 11 To read: “Young leaf: intensity of reddish or brownish coloration”

Char. 12 To read: “Leaf: cross section”

Char. 13 To read: “Leaf: angle in relation to branch”. State 3 to read: “weakly acute to right-angle”

Char. 24 To read: “Sepal: intensity of reddish or brownish coloration”

Char. 34 To delete (+)

Ads 34 & 35 Reference to char. 34 to be deleted in the title

TG/PERILLA(proj.3): *Perilla*

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|---------------|---|
| Char. 10 | State 4 to read: “cordate” |
| Char. 11 & 12 | “upper” to be underlined |
| Char. 13 & 14 | “lower” to be underlined |
| Char. 17 | To check whether to read: “Leaf blade: number of incisions of margin” and change the states accordingly |

TG/VERBEN(proj.3): Verbena

- (a) Changes proposed by the Enlarged Editorial Committee in January 2004, which are already incorporated in the Test Guidelines submitted to the TC

Not considered by the TC-EDC in January 2004

- (b) Changes agreed by the leading expert and all interested experts, which are already incorporated in the Test Guidelines submitted to the TC

None

- (c) Changes proposed by the Enlarged Editorial Committee in March 2004, which are to be included in the Test Guidelines submitted to the TC

| | |
|--------------|--|
| Sect. 3.3.2 | To be deleted |
| Sect. 5.3(e) | To add the color groups from TQ, Sect. 5.5(ii) |
| Char. 4 | To read: “Leaf blade: length” |
| Char. 5 | To read: “Leaf blade: width” |
| Char. 6 | To read: “Leaf blade: shape” |
| Char. 7 | To read: “Leaf blade: division” |
| Char. 12 | To replace: “amount” with “intensity” |
| Char. 13 | To read: “Petiole: length” |
| Char. 15 | State 3 to read: “cylindric” |
| Char. 16 | (+) to be added. Illustration to be provided. |
| TQ, Sect. 1 | To indicate the species |
