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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

GENEVA

**COUNCIL****Thirty-Fifth Ordinary Session****Geneva, October 25, 2001**

PROGRESS REPORT OF THE WORK OF THE TECHNICAL COMMITTEE, THE  
TECHNICAL WORKING PARTIES AND THE WORKING GROUP ON BIOCHEMICAL  
AND MOLECULAR TECHNIQUES AND DNA-PROFILING IN PARTICULAR

*Document prepared by the Office of the Union*

**INTRODUCTION**

1. This document reports on the thirty-seventh session of the Technical Committee, held in April 2001, and the sessions of the Technical Working Parties, held during 2000, which reported to the Technical Committee in April 2001. The sessions of the Technical Working Parties held during 2000 have also previously been reported in documents C/34/10 and C/34/10 Add.

2. In previous reports, it has been the practice to report on the sessions of the Technical Working Parties held after the most recent Technical Committee session. Following this approach would mean that this report would refer to the sessions of the Technical Working Parties held in 2001. However, it is suggested that this would be inappropriate because no reports of these sessions have yet been made to the Technical Committee. It is proposed that future reports of the Technical Working Parties in this document are also confined to those sessions which have already been reported to the Technical Committee.

## TECHNICAL COMMITTEE (TC)

3. The Technical Committee (TC) held its thirty-seventh session in Geneva from April 2 to 4, 2001. The detailed report on the TC session appears in document TC/37/8 Prov.

4. The TC considered the following matters:

*General*

5. It noted the usual reports on the progress of the work of the Technical Working Parties and approved their programs for the coming year.

6. It endeavored to answer the various questions that the individual Technical Working Parties had submitted to it as reproduced in document TC/37/3.

7. It welcomed the annual updating of document TC/37/4 on species on which practical knowledge has been acquired.

8. It received a report on relevant matters discussed in the last sessions of the Administrative and Legal Committee (CAJ), the Consultative Committee and the Council.

*Test Guidelines*

9. The TC considered and adopted the following Test Guidelines on the basis of the amendments as specified in Annex III of TC/37/8 Prov.:

TG/5/7 :	Red Clover / Trèfle violet / Rotklee / Trébol rojo
TG/37/10 :	Turnip / Navet / Herbst-, Mairübe / Nabo
TG/44/10 :	Tomato / Tomate / Tomate / Tomate
TG/88/6 :	Cotton / Cotonnier / Baumwolle / Algodón
TG/89/6 :	Swede, Rutabaga / Chou-navet, Rutabaga / Kohlrübe / Colinabo
TG/94/6 :	Ling, Scots Heather / Callune / Besenheide / Calluna
TG/98/6 :	Actinidia / Actinidia / Actinidia / Actinidia
TG/162/4 :	Garlic / Ail / Knoblauch / Ajo
TG/170/3 :	Subterranean Clover / Trèfle souterrain / Bodenfrüchtiger Klee / Trébol subterráneo
TG/177/3 :	Zantedeschia / Zantedeschie / Kalla, Zantedeschia / Cala
TG/178/3 :	Fodder Radish / Radis oléifère / Ölrettich / Rábano forajero
TG/179/3 :	White Mustard / Moutarde blanche / Weißer Senf / Mostaza blanca
TG/180/3 :	Rescue Grass, Alaska Brome-grass / Brome cathartique, Brome sitchensis / Horntrespe, Alaska-Trespe / Cebadilla, Triguillo, Bromo
TG/181/3 :	Amaryllis / Amaryllis / Amaryllis / Amarilis
TG/182/3 :	Guzmania / Guzmania / Guzmania / Guzmania
TG/183/3 :	Fennel / Fenouil / Fenchel / Hinojo
TG/184/3 :	Globe Artichoke / Artichaut / Artischoke / Alcachofa, Alcaucil
TG/191/2 :	Horse Radish / Raifort Sauvage / Meerrettich / Rábano Salvaje

*Development and Revision of Test Guidelines*

10. It was agreed that a provision for the rapid and partial updating of Test Guidelines should be developed within TGP/7 “Development of Test Guidelines” provided that this did not result in confusion for the users or jeopardize the value of the Test Guidelines.

*TG/1/3 “Revised General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants”*

11. The TC considered the latest draft version of TG/1/3 “Revised General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants” as presented in document TC/37/5, Annex I.

12. On the basis of the amendments incorporated in the revised and agreed text, developed at its session (Annex I : TC/37/9(a)), the TC considered that the principles therein were an appropriate basis for providing technical guidance for the examination of Distinctness, Uniformity and Stability (DUS) and the development of harmonized variety descriptions.

13. The TC agreed to the following route to submission of a text for consideration by the Council:

(a) invite the TC to identify any improvements needed in the French, German and Spanish translations of document TC/37/9(a),

(b) invite the Technical Working Parties, at their meetings in 2001, to consider document TC/37/9(a) and advise of any proposed revisions which, along with any comments arising from the session of the CAJ in April 2001 (and any subsequent written comments), will be reviewed, if necessary, at a further meeting of the Enlarged Editorial Committee, and then,

(c) in the absence of any need for substantial revision of the document, invite the TC, by correspondence, to approve submission of the document to the Council for adoption as document TG/1/3 in October 2001, or;

(d) in the case of a need for substantial changes, invite the Enlarged Editorial Committee to produce a revised document for consideration at April 2002 session of the Committee.

14. The TC examined TC/37/5 Annex II, containing proposed text for the associated “TGP” documents. It considered that the documents were incomplete and decided not to consider the adoption of the TGP documents at that time but to provide a list of relevant existing UPOV documents associated with each TGP document.

15. It was agreed that the development of the TGP documents should be prioritized by the TC and all the Technical Working Parties in the following way:

Highest Priority:	TGP/7	Development of Test Guidelines
Next Priority:	TGP/4	Management of Variety Collections
	TGP/9	Examining Distinctness
	TGP/10	Examining Uniformity (with particular priority for bulk samples).

*Progress Report on the Work of the Ad Hoc Crop Subgroups on Molecular Techniques*

16. The TC received a summary of discussions in the *ad hoc* Crop Subgroups on Molecular Techniques on the basis of document CAJ/43/3 Add., “Terms of Reference of *Ad Hoc* Subgroup of Technical and Legal Experts on Biochemical and Molecular Techniques,” which highlighted their conclusions of where there was most need for such techniques and the possible models for the way in which molecular techniques might be introduced for DUS testing.

17. The TC invited the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT) to consider if an *ad hoc* crop subgroup should be established for peach.

*Arrangements for DUS Testing*

18. The TC reviewed the proposed questionnaire on the arrangements for DUS testing (document TC/37/7) and provided some suggestions for improvement prior to its issue. The results will be presented to the Committee at its next session.

*Review of UPOV Information Databases and Service*

19. On the basis of document TC/37/6 “Review of UPOV Information Databases and Service”, the TC agreed that the value of improved database searching efficiency, completeness of advice to Contracting Parties and clarification of coverage of Test Guidelines justified further work on the development of a UPOV code and invited the Office of the Union to select, from interested parties, a small *ad hoc* working group of technical and administrative experts to:

(a) review the practical value of the existing UPOV documents considered in this document and propose any possible improvements;

(b) in accordance with these findings, review the proposed structure of the UPOV code with a view to maximizing its practical value, and

(c) propose a program for introduction, whilst identifying the resources required for the introduction and maintenance of such a code, together with an analysis of benefits for Contracting Parties.

*Publication of Variety Descriptions*

20. The TC decided to advise the CAJ of the practical difficulties in considering varieties of common knowledge in the DUS test and, in addition, to identify the potential benefits of inclusion of variety description information on the UPOV-ROM. In particular, the TC

highlighted these aspects for the CAJ in its consideration of document CAJ/43/5, "Publication of Variety Descriptions."

*Status of the Technical Questionnaire*

21. The TC requested advice from the CAJ on the status of the information provided in the Technical Questionnaire in relation to the application and decided to incorporate that advice into the appropriate TGP document(s).

*Inclusion of Patented Methods in Test Guidelines*

22. It was agreed that the CAJ should be asked to consider if the inclusion of characteristics, whose examination required the use of processes covered by patent, should be excluded from the Test Guidelines.

*Program for the Thirty-Eighth Session of the Technical Committee*

23. The thirty-eighth session of the TC is to take place in Geneva from April 15 to 17, 2002. It is planned that the following items will be discussed during the session: progress reports and questions presented by the Technical Working Parties; report on relevant matters discussed in the CAJ sessions, the Consultative Committee and the Council; revision of the General Introduction (if necessary); TGP documents; and a report from the *ad hoc* working group on the review of UPOV information databases and service. In addition, the TC will take decisions on the Test Guidelines to be submitted by the Technical Working Parties for final adoption.

24. The Chairperson noted that the quantity of work being handled by the Editorial Committee was such that it might be appropriate to delay the start of the Committee session until Monday afternoon to allow a meeting of the Editorial Committee on Monday morning in addition to their evening meetings, and to end the session on Wednesday afternoon.

*Chairperson and Vice-Chairperson*

25. The TC noted that the chairmanship of Mrs. Elise Buitendag (South Africa) would expire with the closing of the forthcoming ordinary session of the Council in October 2001. It proposed to the Council that it elect Mr. Michael Camlin (United Kingdom) as new Chairman and Ms. Julia Borys (Poland) as new Vice-Chairperson of the TC for the forthcoming three-year term.

PROGRESS REPORTS ON THE WORK OF THE TECHNICAL WORKING PARTIES

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

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

27. The business of the session included: assessment of uniformity; phenotype and genotype; minimum distance and clear distinctness; supporting evidence; possible consequences of introducing molecular markers for DUS testing; statistical treatment of molecular data; management of reference collections - identification of similar varieties; assessment of essential derivation.

*Proposal for Ad hoc Subgroups*

28. The BMT decided to propose establishing *ad hoc* crop subgroups during the eighteen month interval until the next session to make real progress in discussions on possibilities and consequences of the introduction of molecular techniques in DUS testing, the management of reference collections and the judgment of essential derivation. The BMT proposed *ad hoc* subgroups for Oilseed Rape, Wheat, Maize, Tomato and Rose.

*Future program*

29. The experts from Germany offered to host the seventh session. The BMT accepted that offer and agreed to hold its seventh session in Hanover, Germany, since scheduled to take place from November 21 to 23, 2001. During the next session, the BMT plans to discuss the following items: (i) Reports on the discussion in the TC and the Administrative and Legal Committee; (ii) Short presentation on biochemical and molecular techniques: new techniques, advantages and limits of different techniques; (iii) Possibilities and consequences of the introduction of DNA profiling methods in DUS testing (reports from *ad hoc* crop subgroups): (a) Assessment of distinctness, uniformity and stability; (b) Management of reference collections; (c) Essential derivation; (iv) Assessment of variability within varieties and between varieties; (v) Construction and standardization of databases of DNA profiles of varieties; (vi) Statistical methods: (a) Combination of information from diverse data types (AFLP, SSR, morphological data, etc.); (b) Comparison of genetic distances with phenotypic distances; (c) Confidence intervals and improvement of precision of distance estimates; (vii) The use of DNA profiling as a possible tool for management of reference collections in DUS testing; (viii) The use of DNA profiling methods in examining essential derivation.

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

30. The Technical Working Party on Automation and Computer Programs (TWC) held its eighteenth session in Kyiv, from June 12 to 15, 2000, under the chairmanship of Mr. Wieslaw Pilarczyk (Poland) and the Workshop on Data Handling in the same place on June 9 and 10, 2000. The report of that session is presented in document TWC/18/15.

31. It considered the following matters: General Introduction to DUS testing; types of characteristics and their scale levels; incomplete block design; COYD and COYU analysis; the use of more than one location; glossary of statistical terms; future role of molecular markers; telecommunications, exchangeable software and development in the World Wide Web; and received a report on the Workshop on Data Handling.

*Future program*

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

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

33. The Technical Working Party for Agricultural Crops (TWA) held its twenty-ninth session in Uppsala, Sweden, from June 27 to 30, 2000, under the chairmanship of Mrs. Françoise Blouet (France) and the Subgroup meeting on Sugar Cane in the same place on June 26, 2000. A total of 45 participants attended from 23 member States, four observer States, one observer intergovernmental organization and one observer international organization. The report of the session is presented as document TWA/29/21.

34. It considered the following matters: General Introduction to DUS testing; common knowledge; model system for determining distinctness; questionnaire on reference collections; introduction of new characteristics - selection in already protected varieties; breeder's testing; glossary of statistical terms; example varieties.

*Discussions on Test Guidelines*

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

*Ad hoc Crop Subgroups on Molecular Techniques*

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

Subgroup on Oil Seed Rape: Mrs. Françoise Blouet (France)

Subgroup on Wheat: Mr. Peter Button (United Kingdom) [replaced by Mr. Michael Camlin following appointment of Mr. Button to UPOV in September 2000]

Subgroup on Maize: Mrs. Beate Rücker (Germany).

*Future Program*

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

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

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

39. It considered the following matters: seed propagated varieties of ornamental crops; General Introduction to DUS testing.

*Discussions on Test Guidelines*

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

*Ad hoc Crop Subgroups on Molecular Techniques*

41. In response to the request of the TC concerning the selection of chairpersons for the subgroups, the TWO selected Mr. Joost Barendrecht (Netherlands) as Chairman of the Subgroup for Rose species.

*Future Program*

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



plants and forest trees; photodata project; important decisions taken during the last session of the Working Party and the Committee; complementary documents for the General Introduction.

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

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

44. It considered the following matters: number of plants required; crop inventory; possible cooperation with the TFNet; General Introduction to DUS testing; procedure for the adoption of Test Guidelines documents;

#### *Discussions on Test Guidelines*

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

#### *Ad hoc Crop Subgroups on Molecular Techniques*

46. It discussed the proposal by the TC, to establish *ad hoc* crop subgroups on molecular techniques for each of five selected crops. The Working Party expressed its interest in being included in this activity and decided to ask the TC to include Peach in the list of selected crops for *ad hoc* crop subgroups.

#### *Future program*

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

Progress Report on the Work of the Technical Working Party for Vegetables (TWV)

48. The Technical Working Party for Vegetables (TWV) held its thirty-fourth session in Angers, France, from September 11 to 15, 2000, under the chairmanship of Ms. Julia Borys (Poland). The full report is reproduced in document TWV/34/15.

49. It considered the following matters: reports on the work in the TC and its Technical Working Parties; General Introduction to DUS Testing; process for establishing distinctness; handling of different types within the same species or genus in UPOV Test Guidelines; nomenclature of plant genera and species; basic rules of UPOV Test Guidelines; procedure for the preparation, revision and updating of Test Guidelines.

*Discussions on Test Guidelines*

50. During the session, the TWV completed the draft Test Guidelines for Curly Kale (Revision), Fennel, Garlic, Globe Artichoke, Horse Radish, Swede (Revision), Tomato (Revision), Thyme and Turnip (Revision), for submission to the professional organizations for comments. The revised draft Test Guidelines would then be submitted to the TC for final adoption subject to no major comments from the professional organizations. It also discussed the Working Paper on the Test Guidelines for Squash, Vegetable Marrow, which was to be discussed again during its next session;

*Chairman of the Ad hoc Subgroup for Molecular Techniques*

51. In response to the request of the TC concerning the selection of chairpersons for the subgroups, the TWV selected Mr. Richard Brand (France) as Chairman of the Subgroup for Tomato.

*Future Program*

52. The thirty-fifth session of the TWV was scheduled to be held in Salerno, Italy, from June 25 to 29, 2001. At that session, the TWV planned to complete discussions on the draft Test Guidelines for Squash, Vegetable Marrow, to allow presentation, for adoption, by the TC. It also planned to discuss working papers on Test Guidelines for Basil, Chinese Cabbage, Chives, Egg Plant (Revision), Husk Tomato, Kohlrabi (Revision), Lentil, Lettuce (Revision), Melon (Revision), and Rosemary. In addition, the following items were planned for discussion: short report on special problems or difficulties encountered in vegetables; report on the latest session of the TC and recommendations resulting from that session; General Introduction (main document and associated documents).

53. *The Council is invited:*

*(i) to approve the proposed scope for this report and*

*(ii) to note and approve the above information and the program of the Technical Committee and its Technical Working Parties and Working Groups.*

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