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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

TECHNICAL COMMITTEE

Twenty-Third Session
Geneva, October 6 to 8, 1987

REPORT

adopted by the Technical Committee

Opening of the Session

1. The Technical Committee (hereinafter referred to as "the Committee") held its twenty-third session on October 6 and 7, 1987, at the headquarters of UPOV, in Geneva. On the morning of October 8, 1987, it held a joint meeting with the Administrative and Legal Committee in order to discuss the two items "definition and examination of hybrid varieties" and "minimum distances between varieties." The list of participants is given in Annex I to this report.

2. The session was opened by Dr. J.K. Doodson, Chairman of the Committee, who welcomed the participants. The Chairman especially welcomed Dr. M. Hoffman-Hadar (Israel), Mr. H.J. Baltjes (Netherlands), Dr. M. Ingold and Mrs. M. Jenni (Switzerland), who were present for the first time at a session of the Committee.

Adoption of the Agenda

3. The Committee adopted the agenda as given in document TC/XXIII/1 Rev., after having agreed to discuss item 5 on the second day of its session, after the Editorial Committee had met to edit the documents to be discussed under that item.

PROGRESS REPORTS ON THE WORK OF THE TECHNICAL WORKING PARTIES

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

4. Mr. J. Guiard (France, Chairman of the Working Party) reported that the Technical Working Party for Agricultural Crops had held its sixteenth session from June 23 to 25, 1987, in Geneva, Switzerland. The detailed report on that session was given in document TWA/XVI/10. At that session, the Working Party completed its work on the Test Guidelines for Common Vetch (Revision) and for Durum Wheat (Revision) to be communicated to the professional organizations for their comments. It further rediscussed the revision of the Test Guidelines for Lucerne, and for Turnip and Turnip Rape, both of which would, however, require further discussion at the coming session. In addition to its discussions on the drafting of Test Guidelines and their revision, the Working Party dealt with a number of general items and reached the following conclusions:

(i) It noted the progress of work in the Technical Working Party on Automation and Computer Programs, particularly as regards the application of Combined Over-Years Analysis. It expressed some concern at the rapid introduction of that method and warned of proposing and introducing precipitated adaptation of that method before being tested, or more generally, of all new methods without taking into account the modality of testing presently applied by technical services of different member States.

(ii) It took note of the change adopted in the standard Test Guidelines.

(iii) It held a brief discussion on the concept of distinctness and homogeneity with respect to discontinuous characteristics of not truly self-pollinated varieties and of cross-pollinated varieties. In that context, it also discussed the definition of hybrid varieties and of synthetic varieties and the matter of distances between varieties.

(iv) A written report was to be submitted to the Working Party on the status of results of electrophoretic testing of wheat in a number of member States.

5. Since the term of office of the current Chairman of the Working Party, Mr. J. Guiard (France), was to come to an end at the forthcoming ordinary session of the Council, the Working Party suggested to the Technical Committee that it propose Mr. D.P. Feeley (Ireland) to the Council as the new Chairman of the Working Party.

6. The seventeenth session of the Working Party was to take place from July 5 to 8, 1988, in Surgères, France. In view of the comprehensive agenda, an additional day of discussion has been scheduled. During the session, the Working Party would rediscuss, with the aim of submitting the documents to the Technical Committee for adoption, the working papers on revision of the Test Guidelines for Lucerne, for Turnip and Turnip Rape, for Common Vetch and for Durum Wheat. In addition, it would discuss or rediscuss working papers for Test Guidelines for Triticale, Sorghum, Safflower, Bent (Revision), Ryegrass (Revision) and Peas (Revision) and hear the reports of the subgroups. It was further planned to discuss or rediscuss the following matters: progress report on the work of the Technical Working Party on Automation and Computer Programs; concept of distinctness and homogeneity with respect to discontinuous

characteristics in not truly self-pollinated varieties and in cross-pollinated varieties, hybrid varieties; results of electrophoretic tests in wheat. The items "Electrophoresis," "Triticale" and "Durum Wheat" are scheduled for the second day of the session in the presence of technical experts appointed by the professional organizations. Technical experts from the professional organizations are also to be invited to the meeting of the Subgroup on Grasses which would take place in June, 1988, in Denmark.

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

7. Mrs. V. Silvey (United Kingdom, Chairman of the Working Party) reported that the Technical Working Party on Automation and Computer Programs had held its fifth session from June 10 to 12, 1987, at Lyngby, near Copenhagen, Denmark. The detailed report on that session was given in document TWC/V/8. At its session, the Working Party discussed the following items and took the following decisions:

(i) It noted the decision of the Technical Committee with respect to its proposal to replace the present criterion of distinctness for grasses by Combined Over-Years Analysis (COY). It further noted the experience gained with that method and agreed to continue the studies on a suitable level of significance and on application of the method to varieties of other species, particularly vegetable species.

(ii) It further noted the progress of a possible alternative to the UPOV testing methods for homogeneity in cross-fertilized plants. However, that method would require further study during the forthcoming year.

(iii) It took note of the differences in homogeneity testing of self-fertilized plants, but for the time being depended on other Technical Working Parties for comment on current problems and possible future solutions.

(iv) It proposed to the Technical Working Parties that more attention be paid to a logical sequence of states of expression in the case of characteristics which are really quantitative but are reproduced in a qualitative manner, particularly those concerning shape.

(v) It discussed in detail the various methods used in the member States when producing variety descriptions. These include compensation for missing data when calculating the least significant difference (LSD), the number of years taken into account in the calculations and the methods of stabilizing data over a number of years. The Working Party will continue to collect information on these differences in order to facilitate the achievement of harmonized methods when preparing variety descriptions.

(vi) It took note of progress in the field of electronic exchange of information and of the difficulties that had arisen in the preceding year.

(vii) It took note of the collection of information on existing hardware and computer languages used in the member States and is to update that information, particularly as regards the data-base management systems used in the member States.

(viii) It took note of the efforts made to develop a library of software for the assessment of varieties which could be exchanged between the offices of the member States.

8. Since the term of office of Mrs. Silvey (United Kingdom) was to come to an end at the next ordinary session of the Council, the Working Party suggested to the Technical Committee that it propose Dr. F. Laidig (Federal Republic of Germany) to the Council as the new Chairman of the Working Party for the coming three years.

9. The sixth session of the Working Party was to take place from June 7 to 9, 1988, in Edinburgh, United Kingdom. At the session, the Working Party would discuss or rediscuss the following items: Combined Over-Years Analysis (COY); survey of statistical practices; testing for homogeneity of cross-fertilized plants; testing for homogeneity of self-fertilized plants; variety descriptions; harmonization of official gazettes; report on existing data-base management systems; programs which may be exchanged between the computer centers of the offices of the member States; progress report on machine vision techniques for variety identification; non-parametric methods; questions submitted by other Technical Working Parties of UPOV.

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

10. Mr. F. Schneider (Netherlands, Chairman of the Working Party) reported that the Technical Working Party for Fruit Crops had held its eighteenth session from March 18 to 20, 1987, in Kiryat Anavim, Israel. Meetings of a number of subgroups took place at the same venue on March 17 in order to expedite discussion during the session of the Working Party. The detailed report on that session is given in document TWF/XVIII/13. At its session, the Working Party finalized the Test Guidelines for Gooseberry (Revision), Guava, Macadamia and Mango, for submittal to the Technical Committee for final adoption. It also completed its work on the Test Guidelines for Blackberry (Revision) for communication to the professional organizations for their comments. It worked further on Test Guidelines for Banana, for Chestnut, for Jostaberry and for Walnut. In addition to its discussions on the drafting of Test Guidelines and their revision, the Working Party dealt with a number of general items.

11. Since the term of office of Mr. F. Schneider (Netherlands) was to come to an end at the next ordinary session of the Council, the Working Party suggested to the Technical Committee that it propose Mr. B. Bar-Tel (Israel) to the Council as the new Chairman of the Working Party.

12. The nineteenth session of the Working Party would take place from June 29 to July 1, 1988, in Hanover, Federal Republic of Germany. Various subgroups would possibly meet on June 28 at the same venue. During the session, the Working Party would rediscuss the working papers for the Test Guidelines for Blackberry (Revision) with a view to their submission to the Technical Committee. Additionally, working papers for Test Guidelines for Banana, for Chestnut, for Prunus Rootstocks, for Walnut, for Black Currant (Revision), for Red and White Currant (Revision), for Citrus (Revision) and for Jostaberry would be discussed or rediscussed.

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

13. In the absence of the Chairman (Mr. B. Bar-Tel, Israel) and at his request, Dr. M.-H. Thiele-Wittig reported that the Technical Working Party for Ornamental Plants and Forest Trees had held its twentieth session from March 23 to 26, 1987, at Kiryat Anavim, Israel. The detailed report on the session is given in Document TWO/XX/20. At the session, the Working Party finalized the Test Guidelines for Alstroemeria (Revision), for Christmas Cactus, for Easter Cactus, for Regal Pelargonium, for Zonal Pelargonium and Ivy-Leaved Pelargonium (Revision) with a view to their submission to the Technical Committee for final adoption. It further completed its work on the Test Guidelines for Tuberous Begonia Hybrids, for Exacum, for Tulip and for Euphorbia Fulgens (Revision) for communication to the professional organizations for their comments. The Working Party further dealt with Test Guidelines for Gladiolus and for Hortensia, which will nevertheless require further discussion at the forthcoming meeting. In addition to the discussion on the drafting of Test Guidelines, the Working Party also dealt with various general items.

14. Since the term of office of Mr. B. Bar-Tel (Israel) was to end with the next ordinary session of the Council, the Working Party suggested to the Technical Committee that it propose Mr. C.J. Barendrecht (Netherlands) to the Council as the new chairman of the Working Party.

15. The twenty-first session of the Working Party would be held from June 20 to 24, 1988, in Ghent, Belgium. At that session, the Working Party intended to finalize the Test Guidelines for Gladiolus, for Tuberous Begonia Hybrids, for Exacum, for Tulip and for Euphorbia Fulgens (Revision) for submission to the Technical Committee for adoption. It further intended to discuss or rediscuss the following working papers on Test Guidelines: Chinkerinchee, Chrysanthemum (Revision), Carnation (Revision), Dieffenbachia, Gerbera (Revision), Hydrangea, Iris (bulbous), Lachenalia, Leucadendron, Leucospermum, Norway Spruce, Protea, Pyracantha, Rhododendron (Revision), Rose (Revision), Spathiphyllum and Weigela. It was additionally planned to discuss or rediscuss the following matters: report on special developments in the field of plant variety protection; list of reference books and documents; matters for the Technical Working Party on Automation and Computer Programs; color charts; improved efficiency in variety testing.

16. The Committee noted that a pilot project was taking place in Denmark in order to make more plant species, especially ornamental plants and minor crops on which a very limited number of breeders were working, eligible for protection by using the data provided by the breeder himself. According to the Danish expert it was planned, in his country, to compare two sets of data on Christmas Cactus (Schlumbergera) varieties, of which one was provided by the breeder and the other produced by a trained expert from the testing station, in order to see the extent of the difference. Both the breeder and the expert from the testing station would, reportedly, use the UPOV Test Guidelines for Christmas Cactus as the basis of description. The Committee noted further that, in the Netherlands, a similar pilot was under way for mahonia varieties.

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

17. Dr. J. Habben (Federal Republic of Germany, Chairman of the Working Party) reported that the Technical Working Party for Vegetables had held its twentieth session from June 2 to 4, 1987, in Bamberg, Federal Republic of Germany. The detailed report on that session is given in Document TWV/XX/13 Prov. At that session, the Working Party finalized the Test Guidelines for Chinese Cabbage, for Leaf Beet and for Melon for submission to the Technical Committee for final adoption. It further completed its work on Test Guidelines for Vegetable Marrow and Pumpkin, for Endive, for Egg Plant, for Runner Bean (Revision) and for Black Salsify for communication to the professional organizations for their comments. It referred the finalization of the Test Guidelines for Turnip and Turnip Rape to the Technical Working Party for Agricultural Crops. The Working Party further discussed working papers on Test Guidelines for Parsley, but these would require further discussion at the forthcoming session. Lack of time made it impossible for the Working Party to deal with the working papers on Test Guidelines or revised Test Guidelines for numerous other species. In addition to the discussions on the drafting of Test Guidelines and their revision, the Working Party dealt with a number of general items and reached the following conclusions:

(i) It decided to set up a Subgroup for Bremia lactuca, which was to meet on November 4 and 5, 1987, in Cambridge, United Kingdom.

(ii) It noted the report by the Subgroup for Peas and the fact that a further session of that Subgroup would be necessary before a revised draft for Test Guidelines for Peas could be produced.

(iii) It supported the comments made by a number of the technical experts appointed by the professional organizations that more contacts should be established at national level during the drafting of Test Guidelines and that, likewise, more written comments should be distributed by the professional organizations since it was not possible for them to appoint technical experts for every species and experts competent for numerous fields would be less helpful at meetings of the Technical Working Parties on one given species.

18. Since the term of office of Dr. J. Habben (Federal Republic of Germany) was to end at the next ordinary session of the Council, the Working Party suggested to the Technical Committee that it propose Mr. R. Brand (France) to the Council as the new Chairman of the Working Party.

19. The twenty-first session of the Working Party would take place from June 14 to 17, 1988, in Wageningen, Netherlands. [Because of the holding of a Workshop with professional organizations on the Examination of Varieties of Lettuce on June 16 and 17, 1988, at the same place, the Council reduced the session by one day. It will now be held from June 13 to 15, 1988]. At that session, the Working Party would rediscuss the working papers on Test Guidelines for Vegetable Marrow and Pumpkin, for Endive, for Egg Plant, for Runner Bean (Revision) and for Black Salsify with a view to submission of the documents to the Technical Committee for adoption. It would additionally discuss or rediscuss working papers on Test Guidelines for Tomato (Revision), for Peas (Revision), for Asparagus, for Carrot (Revision), for Brussel Sprouts (Revision), for Cabbage (Revision), for Cauliflower (Revision), for Spinach (Revision), for Cucumber, Gherkin (Revision), for Broccoli and for Parsley.

It was additionally intended to discuss or rediscuss the following matters: list of reference books and documents, testing for Bremia lactucae in lettuce, testing for disease. Due to the extensive agenda further additional items, such as the drafting of revised Test Guidelines for Beans and for Lettuce or working papers on Test Guidelines for Watermelon, had to be postponed to the session in 1989.

QUESTIONS PRESENTED BY THE TECHNICAL WORKING PARTIES

Revision of the General Introduction to Test Guidelines

20. The Committee noted paragraphs 1 and 2 of Annex I to document TC/XXIII/3. It confirmed the necessity of revising the General Introduction to Test Guidelines in the near future to include new criteria such as the COY analysis. For the time being, the Office of UPOV was asked to collect more information for that revision.

Continuous Characteristics of Which Only Three States can Actually be Separated

21. The Committee noted paragraphs 3 and 4 of Annex I to document TC/XXIII/3. After long discussions, including the discussion by the Editorial Committee, the Committee agreed, in general, to the following:

(i) The quantitative expression should be used as far as possible, especially in case of characteristics for which the differentiation of states of expression was one-dimensional. This would also apply to most shapes (e.g. narrow elliptic, elliptic, broad elliptic);

(ii) The qualitative expression could be used for quantitative characteristics only if the intermediate states would not exist or, in the case of characteristics of shape, if the differentiation of states of expression was to have more than one dimension.

22. The Committee asked the Office of UPOV to prepare for further discussions by the Technical Working Parties, a discussion paper on the definition as to which kind of steps a given characteristic should have under different conditions [see document TC/XXIII/5].

Test Guidelines for New Kinds of Plants

23. The Committee noted paragraphs 5 and 6 of Annex I to document TC/XXIII/3. It agreed, in general, that UPOV Test Guidelines should be prepared only for species in which more than one member State of UPOV was interested. For new species in which none of the Technical Working Parties was working, a first working paper should be prepared by a Subgroup. The further process of adopting such Test Guidelines should be decided, species by species, by the Technical Committee in a pragmatic way. For Test Guidelines for Oenothera, in which only the United Kingdom was presently interested, the United Kingdom would prepare national Test Guidelines to be applied for the time being only.

Hilum Color in Broad Beans and Field Beans

24. The Committee noted paragraphs 7 and 8 of Annex I to document TC/XXIII/3 and document CAJ/XXI/3, which included the Dutch proposal on important characteristics and minimum distances, distributed during the session. The expert from the Federal Republic of Germany informed the Committee that in his country the decision on two field bean varieties in which the homogeneity in hilum color was not sufficient had been postponed, awaiting the decision of UPOV on this subject. The Committee, however, could not take a final decision at its present session and decided to await further studies in the Technical Working Party for Agricultural Crops.

Use of the Term "Resistance"

25. The Committee noted paragraphs 9 and 10 of Annex I to document TC/XXIII/3 and draft Test Guidelines for Melon (document TG/104/3(proj.)) in which different pathological terms such as resistance, tolerance, and hypersensitivity were appearing. Most of the Committee's experts mentioned that differentiating resistance characteristics into several groups by using the phytopathologically defined terms, would not necessarily meet the purpose of UPOV Test Guidelines. Some experts proposed to use only the word "resistance" and to eliminate words such as "tolerance," "immunity," "susceptibility" from the Test Guidelines in order to avoid unnecessary confusion. After long discussion, the Committee agreed to study the terms "resistance" and "tolerance" further, and to rediscuss their use during its next session. For this purpose Dr. Doodson offered to formulate the definitions of those terms and to send them to the Office of UPOV. The Committee also noted the following literature for further information:

The Terminology Sub-committee of the Federation of British Plant Pathologists, 1973: "A guide to the use of terms in plant pathology." Commonwealth Mycol. Inst., Kew, England. Phytopath. Papers No 17, (55 pp)

Robinson, R.A., 1969: "Disease resistance terminology." Rev. Appl. Mycol. 48. pp. 593 - 606.

Color Pictures as a Supplement to Variety Descriptions

26. The Committee noted paragraphs 11 and 12 of Annex I to document TC/XXIII/3. The Committee agreed that color pictures should not be used as an essential part of variety descriptions but only as a supplement. Some experts emphasized that color pictures should not be used as a supplementary tool for establishing distinctness if the variety in question failed to be distinct in other characteristics.

Items for the Technical Working Party on Automation and Computer Programs (TWC)

27. Discussions were based on paragraphs 13 to 20 of Annex I to document TC/XXIII/3 and the oral reply by Mrs. Silvey, Chairman of the Technical Working Party on Automation and Computer Programs to the content of each of the above-mentioned paragraphs.

28. The Committee agreed that, in general, statistical analysis would be used less on vegetatively propagated species handled by the Technical Working Party for Ornamental Plants and Forest Trees. As for the exchange of information on variety descriptions via computer, the Committee noted that it was feasible to create computer data bases enabling the exchange of not only numerical data but also data given in text form and appearing in the column for remarks.

29. Mrs. Silvey expressed her views on the possibility of making a computer program for converting descriptions of varieties stored in a data base when Test Guidelines were amended. All depended on whether the data base had been devised from the beginning in a way to foresee future changes. A computer program for inserting additional states of expression without causing any change in the order of the presently existing states of characteristics might be less difficult. She suggested that it should be studied whether and how the logical order of states of expression should be taken into account.

Revision of the UPOV Model for a Report on Technical Examination

30. The Committee noted paragraphs 21 and 22 of Annex I to document TC/XXIII/3. Most of the Committee's experts were of the opinion that the Committee and the Technical Working Parties had spent enough time in studying the revised UPOV model, before it was adopted by the Committee at its session last year, and therefore it reconfirmed that the national testing authorities should continue to use the revised UPOV model for both national and international purposes when exchanging variety descriptions. It agreed to accept slight modifications in the lay-out of the model if national authorities had technical difficulty in keeping strictly to the UPOV model given in Annex IV to document TC/XXII/7. However, it asked not to change the order of the requested information.

31. As most of the Committee's experts had the feeling that the first page of the UPOV Model for a report on Technical Examination, which was reproduced in Annex VII to document ST/IX/4, should be also revised, the Committee agreed to study this at its next session. Mr. H.J. Baltjes (Netherlands) offered to prepare the first proposal before the end of the year for presentation to the Technical Working Parties for discussion. The Committee noted already the comments that the first part of the report should be the same as that of the variety description form.

Logical Order of States of Expression in Test Guidelines

32. The Committee endorsed the proposal of the Technical Working Party on Automation and Computer Programs for a logical order of states of expression. It was grateful for Dr. Laidig's offer (Federal Republic of Germany) to check first drafts of Test Guidelines to ascertain whether the order of states of certain characteristics could be improved, as was mentioned in paragraphs 23 and 24 of Annex I to document TC/XXIII/3.

List of Reference Books and Documents

33. The Committee noted paragraphs 25 and 26 of Annex 1 to document TC/XXIII/3 and agreed to the following procedure to up-date that list:

(i) Each Technical Working Party should include new reference books and documents in its annual report if it thought them important.

(ii) The Office of UPOV should revise document TC/XXII/4 when it thought that sufficient additional information made a revision necessary.

Color Charts

34. The Committee noted paragraphs 27 and 28 of Annex I to document TC/XXII/3 and welcomed the report by the expert from the Federal Republic of Germany that the work on the empirical grouping of the RHS Colour Chart, which was under way in his country, had been accelerated.

Participation of Technical Experts from Professional Organizations

35. Discussion was based on paragraphs 29 to 31 of Annex I to document TC/XXIII/3. Some experts in the Committee thought that the technical experts should be invited exclusively to the Subgroup meetings when draft Test Guidelines, for a limited number of species, were discussed intensively. Others mentioned that those Technical Working Parties working on a large number of Test Guidelines could not have subgroup meetings for each species. The Committee reconfirmed that the chairman of each Technical Working Party should decide on how to invite the technical experts to sessions of his Working Party and/or its Subgroups. However, the Committee agreed to recommend to the chairmen of the Working Parties:

(i) to invite technical experts not only to the discussions on Test Guidelines but also to the discussions on selected general subjects such as electrophoresis;

(ii) to prepare, as early as possible, the documents to be discussed at the sessions of Working Parties or Subgroups;

(iii) to ask the professional organizations to send their comments on draft Test Guidelines, in as much detail as possible, so that the participation of professional experts, during the session, would not always be required and not necessarily by all organizations;

(iv) to invite the technical experts to part of the session only;

(v) to inform the technical experts in advance which part of the session they could attend and which subject would be discussed.

Furthermore, the Committee recommended that the UPOV experts should contact more professional experts at the national level when preparing the working papers on Test Guidelines.

Workload of the Technical Working Parties

36. The Committee noted paragraphs 32 and 33 of Annex I to document TC/XXIII/3. Many of the Committee's experts were not in favor of extending sessions of the Working Parties although they recognized the remarkable increase in items to be discussed during sessions in recent years. Some experts suggested that the extension of sessions being planned for the next year by three Technical Working Parties should be regarded as an exception.

Although it was generally agreed that for discussions to be efficient Test Guidelines should be dealt with at Subgroup meetings by true experts working on the species concerned, opinion was split as to how Subgroup meetings should be organized. Those experts representing the Technical Working Party for Agricultural Crops preferred to hold Subgroup meetings separately from the session of the Working Party itself. Other experts, mainly those for horticultural crops, where one expert worked on a large number of different kinds of crops, preferred to hold Subgroup meetings attached to the Working Party's session. Finally, the Committee agreed to recommend that the Chairmen of the Technical Working Parties should look for the most efficient way to work, taking into account the travel costs of the participants and their workload in their own country. It would be advisable to work more by correspondence and to plan sessions so as to give the participants the possibility of not having to participate in a certain part of the session when not absolutely necessary.

Study of the Use of Different Electrophoresis Methods

37. The Committee noted paragraphs 34 and 35 of Annex I to document TC/XXIII/3 and document TWA/XVII/2 introduced by Mrs. Silvey (United Kingdom) which contained the results of the 1987 experiment, carried out by experts from six member States participating in the UPOV co-operative electrophoresis study on wheat, and which had been prepared by Dr. R.J. Cooke (United Kingdom). The Committee agreed, in general, to Dr. Cooke's conclusion that the ISTA standard method was rapid, cheap and easy to operate, and had proved to be a repeatable and acceptable method in various countries.

38. During the discussion, some experts emphasized that characteristics obtained with the help of electrophoresis should not be used to establish distinctness and that the general system of interpretation of the application of electrophoresis should be developed. Others mentioned that electrophoresis should be studied for further species in addition to wheat and that the diagnostic feature of electrophoresis might be used for detecting the presence of certain substances. After the discussions, the Committee agreed that the Technical Working Party for Agricultural Crops and its Subgroup on electrophoresis should discuss this item next year on the basis of more detailed data to be provided by Dr. Cooke. The problems to be discussed would be the following:

(i) the possibility of specifying the laboratory procedure so that the results would be stable, independent of the materials used or of other environmental conditions;

(ii) the possibility of identifying certain characteristics obtained with the help of electrophoresis which it might be possible to use in the existing DUS test procedure with a view to reducing the number of characteristics to be observed and, consequently, time and cost for DUS testing;

(iii) the possibility of applying electrophoresis to species other than wheat.

Furthermore, the Chairman of the Technical Working Party for Agricultural Crops would invite Dr. Cooke to its next session to discuss this item.

Machine Vision

39. Mrs. Silvey (United Kingdom) gave a brief report on the study on the measurement of new characteristics in wheat using machine vision which was under way at the Official Seed Testing Station, NIAB, Cambridge, United Kingdom. According to Mrs. Silvey, with this method the image of wheat grain was captured by video camera and then, with a suitable computer program, converted into a digital form. The motivation of this study was to develop a quicker and less costly method for distinguishing and identifying cultivars. The Committee noted that an attempt was under way to separate all wheat varieties, registered in the United Kingdom, by means of machine vision. Finally, the Committee agreed to rediscuss this item at its next session under a new item "new techniques and equipment."

Combined Over-Years Analysis

40. The Committee noted paragraphs 36 to 46 of Annex I of document TC/XXIII/3 and document TC/XXIII/4 as well as the oral explanation by Mrs. Silvey (Chairman of the Technical Working Party on Automation and Computer Programs). The Committee confirmed that the COY analysis was the best statistical method so far available for processing data from measured characteristics. As for extending the application of the COY analysis, the Committee was reminded that it had recommended that the COY analysis should be applied experimentally to cross-fertilized species other than grass. It agreed to await the outcome of the attempt to apply COY analysis to certain vegetable species which was being carried out by the experts in both the Technical Working Party on Automation and Computer Programs and the Technical Working Party for Vegetables.

41. As for the proposals and comments by the Technical Working Party for Agricultural Crops which were reproduced in subparagraphs (i) to (v) of paragraph 45 of Annex I to document TC/XXIII/3, the Committee noted the following replies by Mrs. Silvey:

(i) During its four years of discussions, the Technical Working Party on Automation and Computer Programs had been well aware of the practical need to maintain some continuity from year to year in the strictness of distinctness decisions. For that reason, it was proposed that some member States might apply at least a 5% significance level in the first few years of using the COY analysis. There should, in practice, be little risk of the 5% significance being applied to reduce standards.

(ii) The Technical Working Party on Automation and Computer Programs thought that the introduction of the COY analysis would lead rather to a change in the decision-taking criterion than a change in the testing methods. It was aware of the importance of taking into account the testing and decision-making techniques when examining the adoption and potential benefits of new statistical methods;

(iii) The options, such as the modified joint regression analysis (MJRA), were a refinement of the COY analysis. For the time being, the Technical Working Party on Automation and Computer Programs would consider them on an experimental rather than on a mandatory basis.

(iv) and (v) The Technical Working Party on Automation and Computer Programs welcomed more non-statistical experts on crops participating in its discussions. The key to achieving smooth transition from old to new methods was to have a sufficient period for close consultation between statisticians and crop experts. This should already be happening if the members of the Technical Working Party on Automation and Computer Programs consulted crop colleagues in their own countries and through other Technical Working Parties.

42. Mrs. Silvey introduced document TC/XXIII/4 which included the background information on COY analysis and a brief description of the computer programs which Dr. Weatherup (United Kingdom) offered to circulate on magnetic tapes to the member States at special request. She suggested further that page 3 of Annex IV to document TWC/IV/13 should be included in that document. [After the session of the Committee, Dr. Weatherup prepared a revised document which would be circulated to the members of the Committee as document TC/XXIII/4 Rev.]

43. The Committee noted further that, in addition to the States mentioned in paragraph 36 of Annex I to document TC/XXIII/3, Ireland would apply the COY analysis to grass species for 1987 or 1988 trials. The Committee, being informed that, in two or three years, more experience of using the COY analysis would be accumulated in different member States, agreed to await the report on the application of the COY analysis from those countries. In the meantime, it invited those States not yet applying or studying the COY method to do so and to bring their findings into the discussions at the Technical Working Party or Technical Committee level.

Testing of Homogeneity in Cross-Fertilized Plants

44. The Committee noted that the Technical Working Party on Automation and Computer Programs was studying the over-years criterion on homogeneity in cross-fertilized crops, as reproduced in paragraphs 47 to 49 of Annex I to document TC/XXIII/3. It was further informed that this study was still at a very premature stage and thus agreed to await its further development in the coming years.

Testing of Homogeneity in Self-Fertilized Plants

45. The Committee noted that the Technical Working Party was studying the applicability of a nominal standard for testing homogeneity in self-fertilized plants, as reproduced in paragraphs 50 to 52 of Annex I to document TC/XXIII/3. It agreed, for the time being, to await the results of the further study by the Technical Working Party on Automation and Computer Programs.

Priorities for the Extension of the List of Species of Which Varieties are Eligible for Protection in the Member States

46. The Committee noted paragraphs 53 and 54 of Annex I to document TC/XXIII/3 and document CAJ/XVIII/2. The discussion focused on how the Technical Working Parties could tackle document CAJ/XVIII/2. Some experts thought that this document could be referred to when deciding on priority for the preparation of

UPOV Test Guidelines. Others felt that each national authority should give its official comment on the priority proposed by the professional organizations. Finally, the majority of the Committee's experts concluded that this question was not within the competence of the Committee and agreed to send the document back to the Administrative and Legal Committee.

Travel Costs for the Chairmen of the Technical Working Parties

47. The expert from Israel proposed that UPOV should participate in the travel costs for the chairmen of the Technical Working Parties as otherwise some countries, especially those far away from Geneva, might be forced to refuse the candidature of their experts as chairmen, which might be a loss for UPOV. Although the majority of the Committee's experts expressed their sympathy with this proposal, the Committee, being aware that this was beyond its competence, decided not to formulate any recommendation, but simply inform the Council of its discussions.

Plant Sanitary Regulations

48. The Committee noted circular C.U 1253-08.1, which contained the addresses of national authorities of individual UPOV member States responsible for plant sanitary regulations for the importation of plant material. All members of the Committee were kindly requested to send to the Office of UPOV, before the end of the year, complementary information such as telephone, telefax and telex numbers.

Test Guidelines

49. The Committee studied the draft Test Guidelines mentioned in paragraph 1 of document TC/XXIII/2, subject to the changes made by the Editorial Committee and reported on during the present session.

50. The Committee finally adopted the Test Guidelines for the following taxa:

- TG/28/8 - Zonal Pelargonium, Ivy-leaved Pelargonium (Revision)
- TG/29/6 - Alstroemeria (Revision)
- TG/51/6 - Gooseberry (Revision)
- TG/101/3 - Christmas Cactus
- TG/104/4 - Melon
- TG/105/3 - Chinese Cabbage
- TG/106/3 - Leaf Beet
- TG/109/3 - Regal Pelargonium
- TG/110/3 - Guava
- TG/111/3 - Macadamia
- TG/112/3 - Mango
- TG/113/2 - Easter Cactus

51. The Committee decided not to include characteristics 57 to 66 in the present version of the Test Guidelines for Melon (TG/104/4). It recommended that the Technical Working Party for Vegetables should study further the wordings and definition of those characteristics on resistance or tolerance and clarify open questions before possible incorporation in the present version at a later stage as an addendum.

52. The Committee noted the status of the Test Guidelines mentioned in paragraphs 3 and 4 of document TC/XXIII/2 and in the updated lists of Test Guidelines, reproduced in Annexes II and III to this report.

Chairmanship

53. At the end of the forthcoming ordinary session of the Council, the terms of office of the chairmen of the five Technical Working Parties would come to an end. The Committee unanimously agreed to recommend to the Council that the following experts be elected chairmen for the next three years:

- TWA - Technical Working Party for Agricultural Crops: Mr. D.P. Feeley, Ireland;
- TWC - Technical Working Party on Automation and Computer Programs: Dr. F. Laidig, Federal Republic of Germany;
- TWF - Technical Working Party for Fruit Crops: Mr. B. Bar-Tel, Israel;
- TWO - Technical Working Party for Ornamental Plants and Forest Trees: Mr. C.J. Barendrecht, Netherlands;
- TWV - Technical Working Party for Vegetables: Mr. R. Brand, France.

Program for the Twenty-Fourth Session

54. The Committee noted that its twenty-fourth session was scheduled to be held on October 10 and 11, 1988. [During its twenty-first ordinary session in October 1987, the Council changed these dates to October 20 and 21, 1988]. The Committee noted that the Editorial Committee would meet in the afternoon of the day before the Technical Committee's session [now October 19, 1988]. It was planned that the following business would be conducted during the twenty-fourth session:

- (i) hearing of progress reports on the work of the Technical Working Parties;
- (ii) discussion of questions raised by the Technical Working Parties;
- (iii) decisions on any Test Guidelines submitted to it for final adoption by the Technical Working Parties;
- (iv) discussion of the introduction of the combined over-years analysis for further species;
- (v) hearing of the report on the follow-up to the study of the use of electrophoretic methods;
- (vi) hearing of the report on the study of new methods, techniques and equipment;
- (vii) discussions on the use of phytopathological terms;

(viii) discussions on a possible reorganization of the work of the Technical Working Parties and of the Technical Committee.

(ix) discussions on the definition and examination of hybrid varieties;

(x) discussions on minimum distances between varieties.

Retirement

55. On behalf of the Committee, Dr. J.K. Doodson thanked Mr. R. Duyvendak (Netherlands, who was not able to attend the present session) and Mr. F. Schneider (Netherlands), who were to retire this year, for their significant contributions to the work of the Technical Working Parties and the Committee for many years and wished them a long and happy retirement.

56. Mr. F. Schneider thanked the members of the Committee and gave a short farewell speech with his proposal for a possible reorganization of the technical work of UPOV. His speech is reproduced in Annex IV to this report. The Committee agreed to discuss his proposal as a new item at its next session [see paragraph 54(viii) above].

Joint Meeting with the Administrative and Legal Committee

57. Following the proposal of the Administrative and Legal Committee at its twentieth session in June 1987, a joint meeting with the Administrative and Legal Committee was held in the morning of October 8, 1987 to discuss "definition and examination of hybrid varieties" and "minimum distances."

58. The meeting was chaired by Mr. F. Espenhain (Denmark), Chairman of the Administrative and Legal Committee. The report on that joint meeting is reproduced in Annex V.

59. This report has been adopted by correspondence.

[Six Annexes follow]

ANNEX I

LIST OF PARTICIPANTS/LISTE DES PARTICIPANTS/TEILNEHMERLISTE

I. MEMBER STATES/ETATS MEMBRES/VERBANDSSTAATEN

BELGIUM/BELGIQUE/BELGIEN

*M. W.J.G. VAN ORMELINGEN, Ingénieur agronome du Ministère de l'agriculture,
Manhattan Center, 21, avenue du Boulevard, 1210 Bruxelles

DENMARK/DANEMARK/DAENEMARK

Mr. F. ESPENHAIN, Head of Office, Board for Plant Novelty, Tystofte,
4230 Skaelskoer

Mrs. J. RASMUSSEN, Director, State Experimental Station, Tystofte,
4230 Skaelskoer

FRANCE/FRANKREICH

*Mlle N. BUSTIN, Secrétaire général, Comité de la protection des obtentions
végétales, Ministère de l'agriculture, 11, rue Jean Nicot, 75007 Paris

*M. F. GOUGE, Président du Comité de la protection des obtentions végétales,
Ministère de l'agriculture, 11, rue Jean Nicot, 75007 Paris

M. J. GUIARD, Ingénieur, Directeur adjoint GEVES, INRA/GEVES, La Minière,
78280 Guyancourt

GERMANY (FED. REP. OF)/ALLEMAGNE (REP. FED. D')/DEUTSCHLAND (BUNDESREPUBLIK)

*Mr. D. BROUER, Referatsleiter, Bundesministerium der Justiz,
Heinemannstr. 6, 5300 Bonn 2

Dr. G. FUCHS, Regierungsdirektor, Bundessortenamt, Postfach 61 04 40,
3000 Hannover 61

* Participants who took part only in the joint session with the
Administrative and Legal Committee

Teilnehmer an der gemeinsamen Tagung mit dem Verwaltungs- und
Rechtsausschuss

Participants à la réunion conjointe avec le Comité administratif et
juridique

Dr. J. HABBEN, Regierungsdirektor, Bundessortenamt, Postfach 61 04 40,
3000 Hannover 61

*Mr. H. KUNHARDT, Leitender Regierungsdirektor, Bundessortenamt,
Postfach 61 04 40, 3000 Hannover 61

HUNGARY/HONGRIE/UNGARN

*Dr. E. PARRAGH (Mrs.), Head of International Section, National Office of
Inventions, P.O. Box 552, 1370 Budapest 5

IRELAND/IRLANDE/IRLAND

Mr. D.P. FEELEY, Department of Agriculture & Food, Agriculture House,
Kildare Street, Dublin 2

ISRAEL

Dr. M. HOFFMAN-HADAR, Chairman, Plant Breeders' Rights Council, Agricultural
Research Organisation, Volcani Centre, P.O. Box 6, Bet Dagan 50250

ITALY/ITALIE/ITALIEN

Dr. N.E. POGNA, Researcher, Istituto Sperimentale Cerealicoltura, Via
Mulino 3, 20079 S. Angelo Lodigiano

*Dr. L. ZANGARA, Dirigente Superiore, Ministero dell'Agricoltura e delle
Foreste, Via Sallustiana 10, 00100 Roma

JAPAN/JAPON/JAPAN

Mr. Y. BAN, Deputy Director, Seeds and Seedlings Division, Ministry of
Agriculture, Forestry and Fisheries, 1-2-1, Kasumigaseki, Chiyoda-ku,
Tokyo

Mr. N. INOUE, First Secretary, Permanent Mission of Japan, 10, avenue de
Budé, 1202 Geneva, Switzerland

NETHERLANDS/PAYS-BAS/NIEDERLANDE

Mr. H.J. BALTIJES, Head Registration Testing, RIVRO, P.B. 32,
6700 AA Wageningen

*Miss Y.E.T.M. GERNER, Legal Adviser, Ministry of Agriculture and Fisheries,
Bezuidenhoutseweg 73, The Hague

*Mr. M. HEUVER, Chairman, Board for Plant Breeders' Rights, P.O. Box 104,
6700 AC Wageningen

Mr. F. SCHNEIDER, Head, Department of Horticultural Botany, RIVRO,
Postbus 32, 6700 AA Wageningen

*Mr. H.D.M. VAN ARKEL, Secretary, Board for Plant Breeders' Rights,
P.O. Box 104, 6700 AC Wageningen

NEW ZEALAND/NOUVELLE ZELANDE/NEUSEELAND

Mr. F.W. WHITMORE, Registrar, Plant Varieties Office, P.O.B. 24, Lincoln

SOUTH AFRICA/AFRIQUE DU SUD/SUEDAFRIKA

Mr. J.U. RIETMANN, Agricultural Counsellor, South African Embassy, 59, Quai
d'Orsay, 75007 Paris, France

SPAIN/ESPAGNE/SPANIEN

Dr. J.-M. ELENA ROSSELLO, Jefe del Registro de Variedades, Instituto Nacional
de Semillas y Plantas de Vivero, José Abascal 56, 28003 Madrid

SWEDEN/SUEDE/SCHWEDEN

*Mr. S. MEJEGAARD, President of Division of the Court of Appeal,
Armfeltsgatan 4, 115 34 Stockholm

SWITZERLAND/SUISSE/SCHWEIZ

Dr. M. INGOLD, Adjoint de Direction, Station fédérale de recherche
agronomique, Changins, 1260 Nyon

Mrs. M. JENNI, Leiterin des Büros für Sortenschutz, Bundesamt für
Landwirtschaft, Mattenhofstrasse 5, 3003 Bern

*Dr. S. PUERRO, Wissenschaftlicher Adjunkt, Bundesamt für geistiges Eigentum,
Einsteinstr. 2, 3003 Bern

*Dr. J.G. RAEBER, Manager, Biotechnology Legal Protection & Regulations,
Department A 5.4, CIBA-GEIGY Ltd., Postfach, 4002 Basel

*Mr. P. RUSTERHOLZ, Prüfungsstellenleiter, Eidgenössische Forschungsanstalt
für Obst-, Wein- und Gartenbau, 8820 Wädenswil

*Mr. H. SPILLMANN, Berater, Bundesamt für Landwirtschaft, Mattenhofstrasse 5,
3003 Bern

UNITED KINGDOM/ROYAUME-UNI/VEREINIGTES KOENIGREICH

- *Mr. J. ARDLEY, Deputy Controller of Plant Variety Rights, Plant Variety Rights Office, White House Lane, Huntingdon Road, Cambridge CB3 0LF
- Dr. J.K. DOODSON, Deputy Director, National Institute of Agricultural Botany, Huntingdon Road, Cambridge CB3 0LE
- *Mr. J. ROBERTS, Senior Executive Officer, Plant Variety Rights Office, White House Lane, Huntingdon Road, Cambridge CB3 0LF
- Mrs. V. SILVEY, Deputy Director, National Institute of Agricultural Botany, Huntingdon Road, Cambridge CB3 0LE

UNITED STATES OF AMERICA/ETATS-UNIS D'AMERIQUE/VEREINIGTE STAATEN VON AMERIKA

- *Mr. W. SCHAPPAUGH, Executive Vice President, American Seed Trade Association, Executive Building - Suite 964, 1030, 15th Street, N.W., Washington, D.C. 20005
- *Mr. S.D. SCHLOSSER, Attorney, Office of Legislation and International Affairs, Patent and Trademark Office, Department of Commerce, Washington, D.C. 20231

II. INTERGOVERNMENTAL ORGANIZATIONS/
ORGANISATIONS INTERGOUVERNEMENTALES/
ZWISCHENSTAATLICHE ORGANISATIONENEUROPEAN ECONOMIC COMMUNITY (EEC)/COMMUNAUTE ECONOMIQUE EUROPEENNE (CEE)/
EUROPAEISCHE WIRTSCHAFTSGEMEINSCHAFT (EWG)

- *Ms. S. KEEGAN, Administrator, Directorate-General for the Internal Market and Industrial Affairs, Intellectual Property Division, 200, rue de la Loi, 1049 Bruxelles, Belgique
- *M. D.M.R. OBST, Administrateur principal, 200, rue de la Loi (Loi 84-7/9), 1049 Bruxelles, Belgique
- Dr. M. VALVASSORI, Commission des Communautés Européennes, Administrateur à la Direction générale de l'Agriculture, VI B II 1, (Loi 84 7-3), 200, rue de la Loi, 1049 Bruxelles, Belgique

EUROPEAN FREE TRADE ASSOCIATION (EFTA)/ASSOCIATION EUROPEENNE DE LIBRE-ECHANGE
(AEELE)/EUROPAEISCHE FREIHANDELSASSOZIATION (EFTA)

- *Ms. L. OLAFSDOTTIR, Assistant, Legal Affairs, European Free Trade Association, 9-11 rue de Varembe, 1211 Geneva 20, Switzerland

III. OFFICERS/BUREAU/VORSITZ

Dr. J.K. DOODSON, Chairman
Dr. G. FUCHS, Vice-Chairman

Mr. F. ESPENHAIN, Chairman (CAJ)

IV. OFFICE OF UPOV/BUREAU DE L'UPOV/BUERO DER UPOV

Dr. W. GFELLER, Vice Secretary-General
Dr. M.-H. THIELE-WITTIG, Senior Counsellor
Mr. A. HEITZ, Senior Officer
Mr. C. ROGERS, Legal Officer
Mr. M. TABATA, Associate Officer

[Annex II follows]

ANNEX III/ANNEXE III/ANLAGE III

Test Guidelines or Draft Test Guidelines (the latter with the indication "(proj.)*" after the document number) Prepared or to be Prepared by the Office of the Union (as of July 1, 1987)

Principes directeurs d'examen ou de leurs projets (pour ces derniers, la cote contient "(proj.)*" préparés ou à préparer par le Bureau de l'Union (état au 1er juillet 1987)

Prüfungsrichtlinien und Entwürfe für Prüfungsrichtlinien (die letztgenannten mit dem Zusatz "(proj.)*" nach der Dokumentnummer), die vom Verbandsbüro ausgearbeitet worden sind oder werden (Stand vom 1. Juli 1987)

Numerical Order of Test Guidelines*/
Principes directeurs dans l'ordre numérique*/
Numerische Anordnung der Prüfungsrichtlinien*

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
* TG/01/2	General Intro- duction	Introduction générale	Allgemeine Ein- führung	
* TG/02/4	Maize	Maïs	Mais	Zea mays L.
* TG/03/8	Wheat	Blé	Weizen	Triticum aestivum L.
o TG/03/...?	Wheat (revision)	Blé (révision)	Weizen (Revision)	Triticum aestivum L.
* TG/04/4	Ryegrass	Ray-grass	Weidelgras	Lolium multiflorum Lam., L. perenne L. & hybrids/hybrides/ Hybriden
o TG/04/...?	Ryegrass (revision)	Ray-grass (révision)	Weidelgras (Revision)	Lolium multiflorum Lam., L. perenne L. & hybrids/hybrides/ Hybriden
* TG/05/4	Red Clover	Trèfle violet	Rotklee	Trifolium pratense L.
* TG/06/1	Lucerne	Luzerne	Luzerne	Medicago sativa L., Medicago X varia Martyn
o TG/06/2(proj.)	Lucerne (revision)	Luzerne (révision)	Luzerne (Revision)	Medicago sativa L., Medicago X varia Martyn
* TG/07/4	Peas	Pois	Erbsen	Pisum sativum L. sensu lato
o TG/07/...?	Peas (revision)	Pois (révision)	Erbsen (Revision)	Pisum sativum L. sensu lato
* TG/08/4 + Corr.	Broad Bean, Field Bean	Fève, Féverole	Dicke Bohne, Ackerbohne	Vicia faba L.
* TG/09/1	Runner Bean	Haricot d'Espagne	Prunkbohne	Phaseolus coccineus L.
- TG/09/2(proj.)	Runner Bean (revision)	Haricot d'Espagne (révision)	Prunkbohne (Revision)	Phaseolus coccineus L.
* TG/10/4	Euphorbia Fulgens	Euphorbia fulgens	Korallenranke	Euphorbia fulgens Karw. ex Klotzsch
- TG/10/5(proj.)	Euphorbia Fulgens (revision)	Euphorbia fulgens (révision)	Korallenranke (Revision)	Euphorbia fulgens Karw. ex Klotzsch
* TG/11/4	Rose	Rosier	Rose	Rosa L.
o TG/11/...?	Rose (revision)	Rosier (révision)	Rose (Revision)	Rosa L.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
* TG/12/4	French Bean	Haricot	Bohne	<i>Phaseolus vulgaris</i> L.
o TG/12/...?	French Bean (revision)	Haricot (révision)	Bohne (Revision)	<i>Phaseolus vulgaris</i> L.
* TG/13/4	Lettuce	Laitue	Salat	<i>Lactuca sativa</i> L.
o TG/13/...?	Lettuce (revision)	Laitue (révision)	Salat (Revision)	<i>Lactuca sativa</i> L.
* TG/14/5	Apple	Pommier	Apfel	<i>Malus</i> Mill.
* TG/15/1 + Corr.	Pear	Poirier	Birne	<i>Pyrus communis</i> L.
* TG/16/4	Rice	Riz	Reis	<i>Oryza sativa</i> L.
* TG/17/3	African Violet	Saintpaulia	Usambaraveilchen	<i>Saintpaulia ionantha</i> H. Wendl.
* TG/18/4	Elatior Begonia	Bégonia elatior	Elatior-Begonie	Begonia-Elatior- hybrids/hybrides/ Hybriden, Syn.: <i>Begonia X hiemalis</i> Fotsch
* TG/19/7	Barley	Orge	Gerste	<i>Hordeum vulgare</i> L. sensu lato
* TG/20/7	Oats	Avoine	Hafer	<i>Avena sativa</i> L. & <i>Avena nuda</i> L.
* TG/21/7	Poplar	Peuplier	Pappel	<i>Populus</i> L.
* TG/22/6	Strawberry	Fraisier	Erdbeere	<i>Fragaria</i> L.
* TG/23/5	Potato	Pomme de terre	Kartoffel	<i>Solanum tuberosum</i> L.
* TG/24/5	Poinsettia	Poinsettia	Poinsettie	<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch
* TG/25/5	Carnation (vegetatively propagated varieties)	Oeillet (variétés à multi- plication végétative)	Nelke (vegetativ vermehrte Sorten)	<i>Dianthus</i> L.
o TG/25/...?	Carnation (vegetatively propagated varieties) (Revision)	Oeillet (variétés à multi- plication végétative) (révision)	Nelke (vegetativ vermehrte Sorten) (Revision)	<i>Dianthus</i> L.
* TG/26/4	Chrysanthemum (Perennial)	Chrysanthème (vivace)	Chrysanthemum (mehrjährig)	<i>Chrysanthemum</i> spec.
o TG/26/...?	Chrysanthemum (Perennial) (revision)	Chrysanthème (vivace) (révision)	Chrysanthemum (mehrjährig) (Revision)	<i>Chrysanthemum</i> spec.
* TG/27/6	Freesia (vegetatively propagated varieties)	Freesia (variétés à multi- plication végétative)	Freesia (vegetativ vermehrte Sorten)	<i>Freesia</i> Eckl. ex Klatt
* TG/28/8	Zonal Pelargonium, Ivy-leaved Pelar- gonium (revision)	Pélargonium zonal, Géranium- lierre (révision)	Zonalpelargonie, Efeupelargonie (Revision)	<i>Pelargonium zonale</i> hort. non (L.) L'Hérit. ex Ait., <i>P. peltatum</i> hort. non (L.) L'Hérit. ex Ait.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
* TG/29/6	Alstroemeria	Alstroèmère	Inkalilie	Alstroemeria L.
* TG/30/3	Bent	Agrostide	Straussgras	Agrostis canina L., A. gigantea Roth, A. stolonifera L., & A. tenuis Sibth.
o TG/30/...?	Bent (revision)	Agrostide (révision)	Straussgras (Revision)	Agrostis canina L., A. gigantea Roth, A. stolonifera L., & A. tenuis Sibth.
* TG/31/6	Cocksfoot	Dactyle	Knaulgras	Dactylis glomerata L.
* TG/32/3	Common Vetch	Vesce commune	Saatwicke	Vicia sativa L.
- TG/32/4(proj.)	Common Vetch (revision)	Vesce commune (révision)	Saatwicke (Revision)	Vicia sativa L.
* TG/33/3	Kentucky Bluegrass (apomictic varieties)	Pâturin des prés (variétés apomictiques)	Wiesenrispe (apomiktische Sorten)	Poa pratensis L.
o TG/33/...?	Kentucky Bluegrass (apomictic varieties) (revision)	Pâturin des prés (variétés apomictiques) (révision)	Wiesenrispe (apomiktische Sorten)(Revision)	Poa pratensis L.
* TG/34/6	Timothy	Fléole	Lieschgras	Phleum pratense L. & Phleum bertolonii DC.
* TG/35/3	Cherry (Sweet, Sour & Duke Cherries, fruit varieties only)	Cerisier (Cerise douce, cerise acide et cerise proprement dite, variétés à fruits seulement)	Kirsche (Sorten von Süß- kirsche, Sauer- kirsche und Weichselkirsche, nur Obstsorten)	Prunus avium (L.) L., P. cerasus L. & hybrids/hybrides/ Hybriden
* TG/36/3 + Corr.	Rape (forage rape included)	Colza (y compris colza fourrager)	Raps (einschliesslich Futerraps)	Brassica napus L.
* TG/37/3	Turnip	Navet	Herbst-, Mairübe	Brassica rapa L. var. rapa
o TG/37/5(proj.)	Turnip, Turnip Rape (revision)	Navet, Navette (révision)	Herbst-, Mairübe, Rübsen (Revision)	Brassica rapa emend. Metzg. L.
* TG/38/6	White Clover	Trèfle blanc	Weissklee	Trifolium repens L.
* TG/39/6	Meadow Fescue, Tall Fescue	Fétuque des prés, Fétuque élevée	Wiesen-, Rohr- schwingel	Festuca pratensis Huds. & Festuca arundinacea Schreb.
* TG/40/3	Black Currant	Cassis	Schwarze Johannisbeere	Ribes nigrum L.
o TG/40/...?	Black Currant (revision)	Cassis (révision)	Schwarze Johannisbeere (Revision)	Ribes nigrum L.
* TG/41/4	European Plum (fruit varieties, rootstocks ex- cluded)	Prunier européen (variétés à fruits à l'exclusion des porte-greffes)	Pflaume (fruchttragende Sorten, Unterlagen ausgeschlossen)	Prunus domestica L. & Prunus insititia L.
* TG/42/3	Rhododendron	Rhododendron	Rhododendron	Rhododendron L.
o TG/42/...?	Rhododendron (revision)	Rhododendron (révision)	Rhododendron (Revision)	Rhododendron L.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
* TG/43/6	Raspberry	Framboisier	Himbeere	<i>Rubus idaeus</i> L. & hybrids/hybrides/ Hybriden
* TG/44/3	Tomato	Tomate	Tomate	<i>Lycopersicon</i> <i>lycopersicum</i> (L.) Karst. ex. Farw.
o TG/44/...?	Tomato (revision)	Tomate (révision)	Tomate (Revision)	<i>Lycopersicon</i> <i>lycopersicum</i> (L.) Karst. ex. Farw.
* TG/45/3	Cauliflower	Chou-fleur, Brocoli (Brocoli à jets exclu)	Blumenkohl	<i>Brassica oleracea</i> L. convar. <i>botrytis</i> (L.) Alef. var. <i>botrytis</i>
o TG/45/...?	Cauliflower (revision)	Chou-fleur, Brocoli (Brocoli à jets exclu) (révision)	Blumenkohl (Revision)	<i>Brassica oleracea</i> L. convar. <i>botrytis</i> (L.) Alef. var. <i>botrytis</i>
* TG/46/3	Onion	Oignon	Zwiebel	<i>Allium cepa</i> L.
* TG/47/5	Streptocarpus	Streptocarpus	Drehfrucht	<i>Streptocarpus</i> X <i>hybridus</i> Voss
* TG/48/3 + Corr.	Cabbage (White cabbage, red cabbage and Savoy cabbage)	Chou pommé (Chou cabus, chou rouge et chou de Milan)	Kopfkohl (Weisskohl, Rot- kohl und Wirsing)	<i>Brassica oleracea</i> L. var. <i>capitata</i> L. f. <i>alba</i> DC.; <i>B. oleracea</i> L. var. <i>capitata</i> L. f. <i>rubra</i> (L.) Thell.; <i>B. oleracea</i> L. var. <i>bullata</i> DC. & <i>B. oleracea</i> L. var. <i>sabauda</i> L.
o TG/48/...?	Cabbage (White cabbage, red cabbage and Savoy cabbage) (revision)	Chou pommé (Chou cabus, chou rouge et chou de Milan) (révision)	Kopfkohl (Weisskohl, Rot- kohl und Wirsing) (Revision)	<i>Brassica oleracea</i> L. var. <i>capitata</i> L. f. <i>alba</i> DC.; <i>B. oleracea</i> L. var. <i>capitata</i> L. f. <i>rubra</i> (L.) Thell.; <i>B. oleracea</i> L. var. <i>bullata</i> DC. & <i>B. oleracea</i> L. var. <i>sabauda</i> L.
* TG/49/3	Carrot	Carotte	Möhre	<i>Daucus carota</i> L.
o TG/49/...?	Carrot (revision)	Carotte (révision)	Möhre (Revision)	<i>Daucus carota</i> L.
* TG/50/5	Vine	Vigne	Rebe	<i>Vitis</i> L.
* TG/51/6	Gooseberry	Groseillier à maquereau	Stachelbeere	<i>Ribes uva-crispa</i> L., <i>R. grossularia</i> L.
* TG/52/2	Red and White Currant	Groseillier à grappes	Rote und Weisse Johannisbeere	<i>Ribes sylvestre</i> (Lam.) Mert. & W. Koch, <i>R. niveum</i> Lindl.
o TG/52/...?	Red and White Currant (revision)	Groseillier à grappes (révision)	Rote und Weisse Johannisbeere (Revision)	<i>Ribes sylvestre</i> (Lam.) Mert. & W. Koch, <i>R. niveum</i> Lindl.
* TG/53/3	Peach	Pêcher	Pfirsich	<i>Prunus persica</i> (L.) Batsch
* TG/54/3	Brussels Sprouts	Chou de Bruxelles	Rosenkohl	<i>Brassica oleracea</i> L. convar. <i>oleracea</i> var. <i>gemmifera</i> DC.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
o TG/54/...?	Brussels Sprouts (revision)	Chou de Bruxelles (révision)	Rosenkohl (Revision)	Brassica oleracea L. convar. oleracea var. gemmifera DC.
* TG/55/3	Spinach	Epinard	Spinat	Spinacia oleracea L.
o TG/55/...?	Spinach (revision)	Epinard (révision)	Spinat (Revision)	Spinacia oleracea L.
* TG/56/3	Almond	Amandier	Mandel	Prunus amygdalus Batsch
* TG/57/3	Flax, Linseed	Lin	Lein	Linum usitatissimum L.
* TG/58/3	Rye	Seigle	Roggen	Secale cereale L.
* TG/59/3	Lily (vegetatively propagated)	Lis (à multiplication végétative)	Lilie (vegetativ vermehrte)	Lilium L.
* TG/60/3	Beetroot	Betterave rouge	Rote Rübe	Beta vulgaris L. var. esculenta
* TG/61/3	Cucumber, Gherkin	Concombre, Cornichon	Gurken	Cucumis sativus L.
o TG/61/...?	Cucumber, Gherkin (revision)	Concombre, Cornichon (révision)	Gurken (Revision)	Cucumis sativus L.
* TG/62/3	Rhubarb	Rhubarbe	Rhabarber	Rheum rhabarbarum L.
* TG/63/3	Black Radish	Radis d'été, d'automne et d'hiver	Rettich	Rhaphanus sativus L. var. niger (Mill.) S. Kerner
* TG/64/3	Radish	Radis de tous les mois	Radieschen	Rhaphanus sativus L. var. radicola Pers.
* TG/65/3	Kohlrabi	Chou-rave	Kohlrabi	Brassica oleracea L. var. gongyloides L.
* TG/66/3	Lupins	Lupins	Lupinen	Lupinus albus, L. angustifolius, L. luteus
* TG/67/4	Sheep's Fescue (including Hard Fescue), Red Fescue	Fétuque ovine (y compris Fétuque durette), Fétuque rouge	Schafschwingel (einschliesslich Härtlicher Schwin- gel), Rotschwingel	Festuca ovina L. sensu lato & F. rubra L.
* TG/68/3	Berberis (vegetatively propagated)	Berberis (à multiplication végétative)	Berberitze (vegetativ vermehrte)	Berberis L.
* TG/69/3	Forsythia	Forsythia	Forsythie	Forsythia Vahl
* TG/70/3	Apricot	Abricotier	Aprikose	Prunus armeniaca L.
* TG/71/3	Hazelnut	Noisetier	Haselnuss	Corylus avellana L. & C. maxima Mill.
* TG/72/4	Willow (tree varieties only)	Saule (variétés arborescentes seulement)	Weide (nur Sorten von Baumweide)	Salix L.
* TG/73/3	Blackberry	Ronce fruitière	Brombeere	Rubus subg. rubus Sect. moriferi & hybrids/hybrides/ Hybriden

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
- TG/73/4(proj.)	Blackberry (revision)	Ronce fruitière (révision)	Brombeere (Revision)	Rubus subgenus Euba- tus Sect. Moriferi & Ursini & hybrids/ hybrides/Hybriden
* TG/74/3	Celeriac	Céleri-rave	Knollensellerie	Apium graveolens L. var. rapaceum (Mill.) Gaud.
* TG/75/3	Cornsalad	Mâche	Feldsalat	Valerianella locusta L. & V. eriocarpa Desv.
* TG/76/3	Sweet Pepper	Piment	Paprika	Capsicum annum L.
* TG/77/3	Gerbera (vegetatively propagated)	Gerbera (à multiplication végétative)	Gerbera (vegetativ vermehrte)	Gerbera Cass.
o TG/77/...?	Gerbera (vegetatively propagated) (revision)	Gerbera (à multiplication végétative) (révision)	Gerbera (vegetativ vermehrte) (Revision)	Gerbera Cass.
* TG/78/3	Kalanchoe (vegetatively propagated)	Kalanchoë (à multiplication végétative)	Kalanchoe (vegetativ vermehrte)	Kalanchoë blossfeldiana v. Poelln. & its hybrids/ses hybrides/ihre Hybriden
* TG/79/3	White Cedar	Thuja du Canada	Lebensbaum	Thuja occidentalis L.
* TG/80/3	Soya Bean	Soja	Sojabohne	Glycine max (L.) Merrill
* TG/81/3	Sunflower	Tournesol	Sonnenblume	Helianthus annuus L. & Helianthus debilis Nutt.
* TG/82/3	Celery	Céleri-branche	Bleichsellerie	Apium graveolens L. var. dulce (Mill.) Pers.
* TG/83/3	Citrus (varieties of Oranges, Manda- rins, Lemons and Grapefruit; ex- cluding rootstock varieties)	Agrumes (variétés d'oran- ger, de mandari- nier, de citron- nier et de limet- tier, de pomélo; à l'exclusion des variétés porte- greffes)	Zitrus (Sorten von Orange, Mandarine, Zitrone und Grape- fruit; Unterlags- sorten ausge- schlossen)	Citrus L.
o TG/83/...?	Citrus (varieties of Oranges, Manda- rins, Lemons and Grapefruit; ex- cluding rootstock varieties) (revision)	Agrumes (variétés d'oran- ger, de mandari- nier, de citron- nier et de limet- tier, de pomélo; à l'exclusion des variétés porte- greffes) (révision)	Zitrus (Sorten von Orange, Mandarine, Zitrone und Grape- fruit; Unterlags- sorten ausge- schlossen) (Revision)	Citrus L.
* TG/84/3	Japanese Plum (fruit varieties only)	Prunier japonais (variétés à fruits seulement)	Ostasiatische Pflaume (nur fruchttragende Sorten)	Prunus salicina Lindl. & other diploid plums/autres pruniers diploides/ andere diploide Pflaumensorten

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
* TG/85/3	Leek	Poireau	Porree	Allium porrum L.
* TG/86/2	Anthurium (vegetatively propagated vari- eties)	Anthurium (variétés à multi- plication végé- tative)	Flamingoblume (vegetativ vermehrte Sorten)	Anthurium Schott
* TG/87/2	Narcissi (includ- ing Daffodils)	Narcisse, Jonquille	Narzisse	Narcissus L.
* TG/88/3	Cotton	Cotonnier	Baumwolle	Gossypium L.
* TG/89/3	Swede	Chou-navet	Kohlrübe	Brassica napus L. var. napobrassica (L.) Rchb.
* TG/90/3	Curly Kale	Chou frisé	Grünkohl	Brassica oleracea L. var. sabellica L.
* TG/91/3	Crown of Thorns	Epine du Christ	Christusdorn	Euphorbia milii Desmoulins & its hybrids/ses hybrides/seine Hybriden)
* TG/92/3	Persimmon (fruit varieties only)	Kaki (seulement vari- étés fruitières)	Kaki (nur Obstsorten)	Diospyros kaki L.
* TG/93/3	Groundnut	Arachide	Erdnuss	Arachis L.
* TG/94/3	Ling, Scotch Heather	Callune	Besenheide	Calluna vulgaris (L.) Hull.
* TG/95/3	Lagerstroemia	Lagerstroemia	Lagerstroemia	Lagerstroemia indica L.
o TG/96/1(proj.)	Norway Spruce (vegetatively propagated vari- eties)	Epicéa commun (variétés à multi- plication végé- tative)	Gemeine Fichte (vegetativ ver- mehrte Sorten)	Picea abies A. Dietr.
* TG/97/3	Avocado	Avocatier	Avocado	Persea americana Mill.
* TG/98/3	Kiwifruit	Actinidia	Kiwi	Actinidia chinensis Pl.
* TG/99/3	Olive (vegetat- ively propagated fruit varieties)	Olivier (variétés fruitières à multiplication végétative)	Olive (vegetativ vermehrte Sorten zur Fruchterzeu- gung)	Olea europaea L.
* TG/100/3	Quince (fruit varieties and rootstock varieties)	Cognassier (variétés fruit- ières et variétés porte-greffes)	Quitte (Sorten zur Fruchter- zeugung und Unterlagssorten)	Cydonia Mill. sensu stricto
* TG/101/3	Christmas Cactus	Cactus de Noël	Weihnachtskaktus	Schlumbergera Lem. including/y compris/ einschliesslich Zygocactus K. Schum.
* TG/102/3	Impatiens	Impatiente	Impatiens	Impatiens L.
* TG/103/3	Juniper	Genévrier	Wacholder	Juniperus L.
* TG/104/4	Melon	Melon	Melone	Cucumis melo L.
* TG/105/3	Chinese Cabbage	Chou Chinois	Chinakohl	Brassica pekinensis L.
+ TG/106/3	Leaf Beet	Poirée	Mangold	Beta vulgaris L. var. vulgaris L.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
- TG/107/2(proj.)	Tuberous Begonia Hybrids	Bégonia tubéreux hybride	Knollenbegonie	Begonia X tuberhybrida Voss
- TG/108/1(proj.)	Gladiolus	Glaïeul	Gladiole	Gladiolus L.
* TG/109/3	Regal Pelargonium	Pélargonium des fleuristes	Edelpelargonie	Pelargonium grandiflorum hort. non Willd.
* TG/110/3	Guava (vegetatively propagated varieties)	Goyavier (variétés à multiplication végétative)	Guave (vegetativ vermehrte Sorten)	Psidium guajava L.
* TG/111/3	Macadamia (vegetatively propagated varieties)	Macadamia (variétés à multiplication végétative)	Macadamia (vegetativ vermehrte Sorten)	Macadamia integrifolia Maiden et Betche; M. tetraphylla L.A.S. Johnston & hybrids/hybrides/Hybriden
* TG/112/3	Mango (vegetatively propagated varieties)	Manguier (variétés à multiplication végétative)	Mango (vegetativ vermehrte Sorten)	Mangifera indica L.
* TG/113/2	Easter Cactus	Cactus jonc	Osterkaktus	Rhipsalidopsis Britt. et Rose, including/y compris/einschliesslich Epiphyllopsis Berger
- TG/114/1(proj.)	Exacum	Exacum	Blaues Lieschen	Exacum L.
- TG/115/1(proj.)	Tulip	Tulipe	Tulpe	Tulipa L.
- TG/116/1(proj.)	Black Salsify	Salsifis noir, Scorsonère	Schwarzwurzel	Scorzonera hispanica L.
- TG/117/1(proj.)	Egg Plant	Aubergine	Aubergine	Solanum melongena L.
- TG/118/1(proj.)	Endive	Chicorée	Endivie	Cichorium endivia L.
- TG/119/1(proj.)	Vegetable Marrow, Pumpkin	Courgette	Gartenkürbis	Cucurbita pepo L.
* TG/03/1	Wheat (only applicable to Triticum durum Desf.)	Blé (applicable à Triticum durum Desf. seulement)	Weizen (nur anwendbar auf Triticum durum Desf.)	Triticum durum Desf.
- TG/120/1(proj.)	Durum Wheat (revision)	Blé dur (révision)	Hartweizen (Revision)	Triticum durum Desf.
o	Asparagus	Aspèrge	Spargel	Asparagus officinalis L.
o	Banana	Bananier	Banane	Musa L.
o	Broccoli	Brocoli	Brokkoli	Brassica oleracea L. convar. botrytis (L.) Alef. var. cymosa Duch.
o	Chestnut	Châtaignier	Kastanie	Castanea
o	Chinkerinchee	Chinkerinchee	Chinkerinchee	Chinkerinchee
o	Chives, Asatsuki	Civette, Ciboulette	Schnittlauch	Allium schoenoprasum L.
o	Dieffenbachia	Dieffenbachia	Dieffenbachia	Dieffenbachia Schott
o	Dill	Aneth	Dill	Anethum graveolens L.

Stage/Doc. No. Etat/No du doc. Stadium/Dok.-Nr.	English	français	deutsch	Latin
o	Hydrangea	Hortensia	Hortensie	Hydrangea L.
o	Iris (bulbous)	Iris (bulbeux)	Iris (zwiebel- bildende)	Iris L.
o	Lachenalia	Lachenalia	Lachenalia	Lachenalia
o	Leucadendron	Leucadendron	Leucadendron	Leucadendron
o	Leucospermum	Leucospermum	Leucospermum	Leucospermum R. Br.
o	Parsley	Persil	Petersilie	Petroselinum crispum (Mill.) Nym. ex A.W. Hill
o	Protea	Protea	Protea	Protea L.
o	Prunus rootstocks	Porte-greffes de Prunus	Prunus-Unterlagen	Prunus L.
o	Pyracantha, Fire- thorn	Pyracantha, Buisson ardent	Feuerdorn	Pyracantha M.J. Roem.
o	Ribes indigrolaria (Jostaberry)	Ribes indigrolaria	Ribes indigrolaria (Jostabeere)	Ribes indigrolaria
o	Safflower	Carthame	Saflor	Carthamus tinctorius L.
o	Sorghum	Sorgho	Mohrenhirse	Sorghum Moench
o	Spathiphyllum	Spathiphyllum	Spathiphyllum	Spathiphyllum Schott
o	Triticale	Triticale	Triticale	Triticum aestivum X Secale cereale
o	Walnut	Noyer	Walnuss	Juglans L.
o	Watermelon	Pastèque	Wassermelone	Citrullus lanatus (Thunb.) Matsum. et Nakai
o	Weigela	Weigela	Weigelie	Weigela Thunb.

* Adopted/Adoptés/Angenommen

+ Technical Committee to adopt/Auprès du Comité technique pour adoption/Vom Technischen Ausschuss anzunehmen

- Professional organizations to comment/Pour observations par les organisations professionnelles/
Zuleitung an die Berufsverbände zur Stellungnahme

o In preparation or planned/En préparation ou prévus/In Vorbereitung oder geplant

Indices of document numbers in alphabetical order are given at the end of this Annex/Index des
numéros des documents par ordre alphabétique figurant à la fin de cette annexe/Verzeichnisse der
Dokumentenummern in alphabetischer Reihenfolge sind am Ende dieser Anlage angegeben

REFERENCE NUMBERS OF TEST GUIDELINES IN ALPHABETICAL ORDER OF THEIR ENGLISH NAMES

African Violet	TG/17	Lemons	TG/83
Almond	TG/56	Lettuce	TG/13
Alstroemeria	TG/29	Leucadendron	-
Anthurium	TG/86	Leucospermum	-
Apple	TG/14	Lily	TG/59
Apricot	TG/70	Ling	TG/94
Asatsuki	-	Linseed	TG/57
Asparagus	-	Lucerne	TG/06
Avocado	TG/97	Lupins	TG/66
Banana	-	Macadamia	TG/111
Barley	TG/19	Maize	TG/02
Beetroot	TG/60	Mandarins	TG/83
Bent	TG/30	Mango	TG/112
Berberis	TG/68	Meadow Fescue	TG/39
Black Currant	TG/40	Melon	TG/104
Black Radish	TG/63	Narcissi	TG/87
Black Salsify	TG/116	Norway Spruce	TG/96
Blackberry	TG/73	Oats	TG/20
Broad Bean	TG/08	Olive	TG/99
Broccoli	-	Onion	TG/46
Brussels Sprouts	TG/54	Oranges	TG/83
Cabbage	TG/48	Parsley	-
Carnation	TG/25	Peach	TG/53
Carrot	TG/49	Pear	TG/15
Cauliflower	TG/45	Peas	TG/07
Celeriac	TG/74	Persimmon	TG/92
Celery	TG/82	Poinsettia	TG/24
Cherry	TG/35	Poplar	TG/21
Chestnut	-	Potato	TG/23
Chinese Cabbage	TG/105	Protea	-
Chinkerinchee	-	Prunus rootstocks	-
Chives	-	Pumpkin	TG/119
Christmas Cactus	TG/101	Pyracantha	-
Chrysanthemum	TG/26	Quince	TG/100
Citrus	TG/83	Radish	TG/64
Cocksfoot	TG/31	Rape	TG/36
Common Vetch	TG/32	Raspberry	TG/43
Cornsalad	TG/75	Red cabbage	TG/48
Cotton	TG/88	Red Clover	TG/05
Crown of Thorns	TG/91	Red Currant	TG/52
Cucumber	TG/61	Red Fescue	TG/67
Curly Kale	TG/90	Regal Pelargonium	TG/109
Daffodils	TG/87	Rhododendron	TG/42
Dieffenbachia	-	Rhubarb	TG/62
Dill	-	Ribes indigrolaria	-
Durum Wheat	TG/120	Rice	TG/16
Easter Cactus	TG/113	Rose	TG/11
Egg Plant	TG/117	Runner Bean	TG/09
Elatior Begonia	TG/18	Rye	TG/58
Endive	TG/118	Ryegrass	TG/04
Euphorbia Fulgens	TG/10	Safflower	-
European Plum	TG/41	Savoy cabbage	TG/48
Evening Primrose	-	Scotch Heather	TG/94
Exacum	TG/114	Sheep's Fescue	TG/67
Field Bean	TG/08	Sorghum	-
Firethorn	-	Soya Bean	TG/80
Flax	TG/57	Spathiphyllum	-
Forsythia	TG/69	Spinach	TG/55
Freesia	TG/27	Strawberry	TG/22
French Bean	TG/12	Streptocarpus	TG/47
General Introduction	TG/01	Sunflower	TG/81
Gerbera	TG/77	Swede	TG/89
Gherkin	TG/61	Sweet Pepper	TG/76
Gladiolus	TG/108	Tall Fescue	TG/39
Gooseberry	TG/51	Timothy	TG/34
Grapefruit	TG/83	Tomato	TG/44
Groundnut	TG/93	Triticale	-
Guava	TG/110	Tuberous Begonia	TG/107
Hard Fescue	TG/67	Hybrids	-
Hazelnut	TG/71	Tulip	TG/115
Hydrangea	-	Turnip	TG/37
Impatiens	TG/102	Turnip Rape	TG/37
Iris	-	Vegetable Marrow	TG/119
Ivy-leaved Pelargonium	TG/28	Vine	TG/50
Japanese Plum	TG/84	Walnut	-
Jostaberry	-	Watermelon	-
Juniper	TG/103	Weigela	-
Kalanchoe	TG/78	Wheat	TG/03
Kentucky Bluegrass	TG/33	White cabbage	TG/48
Kiwifruit	TG/98	White Cedar	TG/79
Kohlrabi	TG/65	White Clover	TG/38
Lachenalia	-	White Currant	TG/52
Lagerstroemia	TG/95	Willow	TG/72
Leaf Beet	TG/106	Zonal Pelargonium	TG/28
Leek	TG/85		

NUMEROS DE REFERENCE DES PRINCIPES DIRECTEURS D'EXAMEN EN ORDRE ALPHABETIQUE DES NOMS FRANCAIS

Abricotier	TG/70	Introduction générale	TG/01
Actinidia	TG/98	Iris	-
Agrostide	TG/30	Jonquille	TG/87
Agrumes	TG/83	Kaki	TG/92
Alstroemère	TG/29	Kalanchoë	TG/78
Amandier	TG/56	Lachenalia	-
Aneth	-	Lagerstroemia	TG/95
Anthurium	TG/86	Laitue	TG/13
Arachide	TG/93	Leucadendron	-
Aspèrge	-	Leucospermum	-
Aubergine	TG/117	Limettier	TG/83
Avocatier	TG/97	Lin	TG/57
Avoine	TG/20	Lis	TG/59
Bananier	-	Lupins	TG/66
Bégonia elatior	TG/18	Luzerne	TG/06
Bégonia tubéreux hybride	TG/107	Macadamia	TG/111
Berberis	TG/68	Mâche	TG/75
Betterave rouge	TG/60	Maïs	TG/02
Blé	TG/03	Mandarinier	TG/83
Blé dur	TG/120	Manguier	TG/112
Brocoli	-	Melon	TG/104
Buisson ardent	-	Narcisse	TG/87
Cactus de Noël	TG/101	Navet	TG/37
Cactus jonc	TG/113	Navette	TG/37
Callune	TG/94	Noisetier	TG/71
Carotte	TG/49	Noyer	-
Carthame	-	Oeillet	TG/25
Cassis	TG/40	Oenothère	-
Céleri-branché	TG/82	Oignon	TG/46
Céleri-rave	TG/74	Olivier	TG/99
Cerisier	TG/35	Onagre	-
Châtaignier	-	Oranger	TG/83
Chicorée	TG/118	Orge	TG/19
Chinkerinchee	-	Pastèque	-
Chou cabus	TG/48	Pâturin des prés	TG/33
Chou Chinois	TG/105	Pêcher	TG/53
Chou de Bruxelles	TG/54	Pélargonium zonal	TG/28
Chou de Milan	TG/48	Pélargonium des fleuristes	TG/109
Chou frisé	TG/90	Persil	-
Chou pommé	TG/48	Peuplier	TG/21
Chou rouge	TG/48	Piment	TG/76
Chou-fleur	TG/45	Poinsettia	TG/24
Chou-navet	TG/89	Poireau	TG/85
Chou-rave	TG/65	Poirée	TG/106
Chrysanthème	TG/26	Poirier	TG/15
Ciboulette	-	Pois	TG/07
Citronnier	TG/83	Pomélo	TG/83
Civette	-	Pomme de terre	TG/23
Cognassier	TG/100	Pommier	TG/14
Colza	TG/36	Porte-greffes de Prunus	-
Concombre	TG/61	Protea	-
Cornichon	TG/61	Prunier européen	TG/41
Cotonnier	TG/88	Prunier japonais	TG/84
Courgette	TG/119	Pyracantha	-
Dactyle	TG/31	Radis d'été, d'automne et d'hiver	TG/63
Dieffenbachia	-	Radis de tous les mois	TG/64
Epicéa commun	TG/96	Ray-grass	TG/04
Epinard	TG/55	Rhododendron	TG/42
Epine du Christ	TG/91	Rhubarbe	TG/62
Euphorbia fulgens	TG/10	Ribes indigrolaria	-
Exacum	TG/114	Riz	TG/16
Fétuque des prés	TG/39	Ronce fruitière	TG/73
Fétuque durette	TG/67	Rosier	TG/11
Fétuque élevée	TG/39	Saintpaulia	TG/17
Fétuque ovine	TG/67	Salsifis noir	TG/116
Fétuque rouge	TG/67	Saule	TG/72
Fève	TG/08	Scorsonère	TG/116
Féverole	TG/08	Seigle	TG/58
Fléole	TG/34	Soja	TG/80
Forsythia	TG/69	Sorgho	-
Fraisier	TG/22	Spathiphyllum	-
Framboisier	TG/43	Streptocarpus	TG/47
Freesia	TG/27	Thuya du Canada	TG/79
Genévrier	TG/103	Tomate	TG/44
Geranium-lierre	TG/28	Tournesol	TG/81
Gerbera	TG/77	Trèfle blanc	TG/38
Glaïeul	TG/108	Trèfle violet	TG/05
Goyavier	TG/110	Triticale	-
Groseillier à maquereau	TG/51	Tulipe	TG/115
Groseillier à grappes	TG/52	Vesce commune	TG/32
Haricot	TG/12	Vigne	TG/50
Haricot d'Espagne	TG/09	Weigela	-
Hortensia	-		
Impatiente	TG/102		

REFERENZNUMMERN DER PRUEFUNGSRICHTLINIEN IN ALPHABETISCHER REIHENFOLGE DER DEUTSCHEN NAMEN

Ackerbohne	TG/08	Mairübe	TG/37
Allgemeine Einführung	TG/01	Mais	TG/02
Apfel	TG/14	Mandarine	TG/83
Aprikose	TG/70	Mandel	TG/56
Aubergine	TG/117	Mango	TG/112
Avocado	TG/97	Mangold	TG/106
Banane	-	Melone	TG/104
Baumwolle	TG/88	Möhre	TG/49
Berberitze	TG/68	Mohrenhirse	-
Besenheide	TG/94	Nachtkerze	-
Birne	TG/15	Narzisse	TG/87
Blaues Lieschen	TG/114	Melke	TG/25
Bleichsellerie	TG/82	Olive	TG/99
Blumenkohl	TG/45	Orange	TG/83
Bohne	TG/12	Ostasiatische Pflaume	TG/84
Brokkoli	-	Osterkaktus	TG/113
Brombeere	TG/73	Pappel	TG/21
Chinakohl	TG/105	Paprika	TG/76
Chinkerinchee	-	Petersilie	-
Christusdorn	TG/91	Pfirsich	TG/53
Chrysantheme	TG/26	Pflaume	TG/41
Dicke Bohne	TG/08	Poinsettie	TG/24
Dieffenbachia	-	Porree	TG/85
Dill	-	Protea	-
Drehfrucht	TG/47	Prunkbohne	TG/09
Edelpelargonie	TG/109	Prunus-Unterlagen	-
Efeupelargonie	TG/28	Quitte	TG/100
Elatior-Begonie	TG/18	Radieschen	TG/64
Endivie	TG/118	Raps	TG/36
Erbsen	TG/07	Rebe	TG/50
Erdbeere	TG/22	Reis	TG/16
Erdnuss	TG/93	Rettich	TG/63
Feldsalat	TG/75	Rhabarber	TG/62
Feuerdorn	-	Rhododendron	TG/42
Flamingoblume	TG/86	Ribes indigrolaria	-
Forsythie	TG/69	Roggen	TG/58
Freesie	TG/27	Rohrschwinge1	TG/39
Gartenkürbis	TG/119	Rose	TG/11
Gemeine Fichte	TG/96	Rosenkohl	TG/54
Gerbera	TG/77	Rote Johannisbeere	TG/52
Gerste	TG/19	Rote Rübe	TG/60
Gladiole	TG/108	Rotklee	TG/05
Grapefruit	TG/83	Rotkohl	TG/48
Grünkohl	TG/90	Rotschwinge1	TG/67
Guave	TG/110	Rübsen	TG/37
Gurken	TG/61	Saatwicke	TG/32
Hafer	TG/20	Saflor	-
Härtlicher Schwinge1	TG/67	Salat	TG/13
Hartweizen	TG/120	Schafschwinge1	TG/67
Haselnuss	TG/71	Schnittlauch	-
Herbstrübe	TG/37	Schwarze Johannisbeere	TG/40
Himbeere	TG/43	Schwarzwurzel	TG/116
Hortensie	-	Sojabohne	TG/80
Impatiens	TG/102	Sonnenblume	TG/81
Inkalilie	TG/29	Spargel	-
Iris	-	Spathiphyllum	-
Jostabeere	-	Spinat	TG/55
Kaki	TG/92	Stachelbeere	TG/51
Kalanchoe	TG/78	Straussgras	TG/30
Kartoffel	TG/23	Tomate	TG/44
Kastanie	-	Triticale	-
Kirsche	TG/35	Tulpe	TG/115
Kiwi	TG/98	Usambaraveilchen	TG/17
Knaulgras	TG/31	Wacholder	TG/103
Knollenbegonie	TG/107	Walnuss	-
Knollensellerie	TG/74	Wassermelone	-
Kohlrabi	TG/65	Weide	TG/72
Kohlrübe	TG/89	Weidelgras	TG/04
Kopfkohl	TG/48	Weigelia	-
Korallenranke	TG/10	Weihnachtskaktus	TG/101
Lachenalia	-	Weisse Johannisbeere	TG/52
Lagerstroemia	TG/95	Weissklee	TG/38
Lebensbaum	TG/79	Weisskohl	TG/48
Lein	TG/57	Weizen	TG/03
Leucadendron	-	Wieserispe	TG/33
Leucospermum	-	Wiesenschwinge1	TG/39
Lieschgras	TG/34	Wirsing	TG/48
Lilie	TG/59	Zitrone	TG/83
Lupinen	TG/66	Zitrus	TG/83
Luzerne	TG/06	Zonalpelargonie	TG/28
Macadamia	TG/111	Zwiebel	TG/46

REFERENCE NUMBERS OF TEST GUIDELINES IN ALPHABETICAL ORDER OF THEIR LATIN NAMES
NUMEROS DE REFERENCE DES PRINCIPES DIRECTEURS D'EXAMEN EN ORDRE ALPHABETIQUE DES NOMS LATINS
REFERENZNUMMERN DER PRUEFUNGSRICHTLINIEN IN ALPHABETISCHER REIHENFOLGE DER LATEINISCHEN NAMEN

Actinidia chinensis Pl.	TG/98	Dianthus L.	TG/25	Phaseolus vulgaris L.	TG/12
Agrostis canina L.	TG/30	Dieffenbachia Schott	-	Phleum bertolonii DC.	TG/34
Agrostis gigantea Roth	TG/30	Diospyros kaki L.	TG/92	Phleum pratense L.	TG/34
Agrostis stolonifera L.	TG/30	Epiphyllopsis Berger	TG/113	Picea abies A. Dietr.	TG/96
Agrostis tenuis Sibth.	TG/30	Euphorbia pulcherrima Willd. ex Klotzsch	TG/24	Pisum sativum L. sensu lato	TG/07
Allium cepa L.	TG/46	Euphorbia fulgens Karw. ex Klotzsch	TG/10	Poa pratensis L.	TG/33
Allium porrum L.	TG/85	Euphorbia milii Desmoulin	TG/91	Populus L.	TG/21
Allium schoenoprasum L.	-	Exacum L.	TG/114	Protea L.	-
Alstroemeria L.	TG/29	Festuca arundinacea Schreb.	TG/39	Prunus amygdalus Batsch	TG/56
Anethum graveolens L.	-	Festuca ovina L. sensu lato	TG/67	Prunus armeniaca L.	TG/70
Anthurium Schott	TG/86	Festuca pratensis Huds.	TG/39	Prunus avium (L.) L.	TG/35
Apium graveolens L. var. rapaceum (Mill.) Gaud.	TG/74	Festuca rubra L.	TG/67	Prunus cerasus L.	TG/35
Apium graveolens L. var. dulce (Mill.) Pers.	TG/82	Forsythia Vahl	TG/69	Prunus domestica L.	TG/41
Arachis L.	TG/93	Fragaria L.	TG/22	Prunus insititia L.	TG/41
Asparagus officinalis L.	-	Freesia Eckl. ex Klatt	TG/27	Prunus L.	-
Avena nuda L.	TG/20	Gerbera Cass.	TG/77	Prunus persica (L.) Batsch	TG/53
Avena sativa L.	TG/20	Gladiolus L.	TG/108	Prunus salicina Lindl.	TG/84
Begonia X hiemalis Fotsch	TG/18	Glycine max (L.) Merrill	TG/80	Psidium guajava L.	TG/110
Begonia X tuberhybrida Voss	TG/107	Gossypium L.	TG/88	Pyracantha M.J. Roem.	-
Begonia-Elatior	TG/18	Helianthus annuus L.	TG/81	Pyrus communis L.	TG/15
Berberis L.	TG/68	Helianthus debilis Nutt.	TG/81	Rhaphanus sativus L. var. niger (Mill.) S. Kerner	TG/63
Beta vulgaris L. var. esculenta	TG/60	Hordeum vulgare L. sensu lato	TG/19	Rhaphanus sativus L. var. radicola Pers.	TG/64
Beta vulgaris L. var. vulgaris L.	TG/106	Hydrangea L.	-	Rheum rhabarbarum L.	TG/62
Brassica napus L.	TG/36	Impatiens L.	TG/102	Rhipsalidopsis Britt. et Rose	TG/113
Brassica napus L. var. napobrassica (L.) Rchb.	TG/89	Iris L.	-	Rhododendron L.	TG/42
Brassica oleracea L. var. bullata DC.	TG/48	Juglans L.	-	Ribes grossularia L.	TG/51
Brassica oleracea L. var. capitata L. f. alba DC.	TG/48	Juniperus L.	TG/103	Ribes indigolaria	-
Brassica oleracea L. var. capitata L. f. rubra (L.) Thell.	TG/48	Kalanchoë blossfeldiana v. Poelln.	TG/78	Ribes nigrum L.	TG/40
Brassica oleracea L. var. gongylodes L.	TG/65	Lachenalia	-	Ribes niveum Lindl.	TG/52
Brassica oleracea L. var. sabellica L.	TG/90	Lactuca sativa L.	TG/13	Ribes sylvestri (Lam.) Mert. & W. Koch	TG/52
Brassica oleracea L. var. sabauda L.	TG/48	Lagerstroemia indica L.	TG/95	Ribes uva-crispa L.	TG/51
Brassica oleracea L. convar. botrytis (L.) Alef. var. botrytis	TG/45	Leucadendron	-	Rosa L.	TG/11
Brassica oleracea L. convar. botrytis (L.) Alef. var. cymosa Duch.	-	Leucospermum R. Br.	-	Rubus idaeus L.	TG/43
Brassica oleracea L. convar. oleracea var. gemmifera DC.	TG/54	Lilium L.	TG/59	Rubus subg. rubus Sect. moriferi	TG/73
Brassica pekinensis L.	TG/105	Linum usitatissimum L.	TG/57	Saintpaulia ionantha H. Wendl.	TG/17
Brassica rapa emend. Metzg. L.	TG/37	Lolium multiflorum Lam.	TG/04	Salix L.	TG/72
Calluna vulgaris (L.) Hull.	TG/94	Lolium perenne L.	TG/04	Schlumbergera Lem.	TG/101
Capsicum annum L.	TG/76	Lupinus albus	TG/66	Scorzonera hispanica L.	TG/116
Carthamus tinctorius L.	-	Lupinus angustifolius	TG/66	Secale cereale L.	TG/58
Castanea	-	Lupinus luteus	TG/66	Solanum melongena var. esculentum Nees	TG/117
Chinkerinchee	-	Lycopersicon lycopersicum (L.) Karst. ex. Farw.	TG/44	Solanum tuberosum L.	TG/23
Chrysanthemum spec.	TG/26	Macadamia integrifolia Maiden et Betche	TG/111	Sorghum Moench	-
Cichorium endivia L.	TG/118	Macadamia tetraphylla L.A.S. Johnston	TG/111	Spathiphyllum Schott	-
Citrullus lanatus (Thunb.) Matsum. et Nakai	-	Malus Mill.	TG/14	Spinacia oleracea L.	TG/55
Citrus L.	TG/83	Mangifera indica L.	TG/112	Streptocarpus X hybridus Voss	TG/47
Corylus avellana L.	TG/71	Medicago sativa L.	TG/06	Thuya occidentalis L.	TG/79
Corylus maxima Mill.	TG/71	Medicago X varia Martyn	TG/06	Trifolium pratense L.	TG/05
Cucumis melo L.	TG/104	Musa L.	-	Trifolium repens L.	TG/38
Cucumis sativus L.	TG/61	Narcissus L.	TG/87	Triticum aestivum L.	TG/03
Cucurbita pepo L.	TG/119	Olea europaea L.	TG/99	Triticum aestivum X Secale cereale	-
Cydonia Mill. sensu stricto	TG/100	Oryza sativa L.	TG/16	Triticum durum Desf.	TG/120
Dactylis glomerata L.	TG/31	Pelargonium grandiflorum hort. non Willd.	TG/109	Tulipa L.	TG/115
Daucus carota L.	TG/49	Pelargonium peltatum hort. non (L.) L'Hérit. ex Ait.	TG/28	Valerianella eriocarpa Desv.	TG/75
		Pelargonium zonale hort. non (L.) L'Hérit. ex Ait.	TG/28	Valerianella locusta L.	TG/75
		Persea americana Mill.	TG/97	Vicia faba L.	TG/08
		Petroselinum crispum (Mill.) Nym. ex A.W. Hill	-	Vicia sativa L.	TG/32
		Phaseolus coccineus L.	TG/09	Vitis L.	TG/50
				Weigela Thunb.	-
				Zea mays L.	TG/02
				Zygocactus K. Schum.	TG/101

SOME AFTERTHOUGHTS ABOUT UPOV

Farewell Speech given by Mr. F. Schneider (Netherlands)

on October 6, 1987

At the beginning of UPOV's activities, and even before that, I was Secretary of the Technical Working Party for Vegetables. Since 1974, I have occupied continuously the chair of one of the horticultural Working Parties. Against this background, I can therefore take the liberty to share with you some general afterthoughts.

In the first place, I must confess that it was an interesting experience for me, coming from the botanical side, to have to cooperate so closely with lawyers and administrators and to work together on the same projects. Starting from very different disciplines, it was understandable that often different views on one and the same problem could arise. An example of this was the practically unshaken faith the legal people had in the variety description in thinking that the description alone was sufficient to identify plant material. That proved to be not the case and everyone had to accept the fact that for identification purposes one does not need only the description, but also the original material or material that is directly derived from and compared with the original material. Indeed, in the worse cases, the description plus the material was not sufficient alone, but had to be supplemented by a technical expert, too.

Observing this phenomenon and learning from the many infringement cases that appeared in court in the Netherlands, I am convinced that we should arrange our examination work in conformity. This means that we should move the equilibrium from the description towards the material: the description could be restricted to classifying characteristics combined with a shadowgraph or color picture or possibly with the addition of some differentiating characteristics to facilitate comparison with the nearest older variety. On the other hand, the deposit of the material demands an increased effort especially in the case of vegetatively propagated material. International cooperation in the form of centralized testing will play an important role in this conservation of living material.

Another general remark I should like to make concerns the whole UPOV system of committees, working parties and workshops. It is clear that the most important topics in the field of breeders' rights, such as denominations, trademarks, minimum distances, the effect of mutations, the influence of genetic engineering on legislation, etc., are mixtures of botanical, legal and administrative aspects. For that reason it was efficient to discuss them in the original Steering Committee in which all these disciplines were represented. For the same reason it was not such a good idea to split up this Steering Committee into a Technical Committee and an Administrative and Legal Committee. A second problem is the difficulty for an Editorial Committee to restrict its attention and efforts to purely editorial matters.

A third problem is that the Working Parties have to divide their attention over widely diverging species, diverging in a botanical way and/or in a geographical sense. On the other hand, there are species that are rather awkwardly covered by different Working Parties.

These problems could be solved:

1. By bringing the Technical Committee and the Administrative and Legal Committee together again in one Steering Committee.
2. By amalgamating the Technical Working Parties and the Editorial Committee in one Central Technical Working Party to coordinate a varying number of special committees and workshops.
3. By treating special subjects such as automation and, for instance, standardization of morphological and physiological terms in special ad hoc committees.
4. By establishing ad hoc workshops to prepare working papers on Test Guidelines in such a way that every workshop restricts itself to one species or group of related species, related in a botanical and a geographical way. The results of these workshops can be reported by their chairmen and discussed in the Central Technical Working Party. In this way the UPOV Secretariat would not need to participate in all workshops and travelling costs and time could be saved.

What you may do with these suggestions is not my affair anymore, but at least I hope they will lead you to further developing the efficiency of your work and your organization. I hope also that your future work will be done in the good ambiance that I have experienced, thankfully, during my twenty UPOV years.

[Annex V follows]

JOINT MEETING WITH THE ADMINISTRATIVE AND LEGAL COMMITTEE

Excerpt from Document CAJ/XXI/4 Containing the Report on the
Twenty-First Session of the Administrative and Legal CommitteeDefinition and Examination of Hybrid Varieties

3. Discussions were based on document CAJ/XX/7 and paragraphs 55 to 59 of Annex I to document TC/XXIII/3.

4. Mr. J. Guiard (France) introduced document CAJ/XX/7 and stated that the application of the principle proposed in the motion by the ASSINSEL Maize Section (see document CAJ/XIX/5)--that "hybrids of maize should be defined and distinguished by their constituents and the way they [were] associated"--had presented some problems in the case of very similar hybrids. Moreover, the procedure for the testing of hybrid maize varieties had to be reconsidered in view of the great number of applications (some 250 to 280 a year, of which some 60% to 70% were withdrawn after the first year of testing). The new procedure that was in experimental use was based on the ASSINSEL motion, with the following adjustments:

(i) The characteristics observed at parent level were classified into groups according to knowledge on their genetic background, polygenic characteristics being in general given more weight than the ones with a simpler inheritance;

(ii) Large minimum differences were required: for example four notes in a 1-9 scale of the UPOV Test Guidelines, for a visually observed quantitative characteristic, or a significant difference at the 0.01 threshold in a test comprising more than 30 inbred lines, for a measured characteristic.

5. Under the above procedure, if for example line B was distinct from line C, hybrid A x B would be different from hybrid A x C. That did not exclude the description of the hybrid material. If line B and line C were not found to be distinct, the authorities would examine the inbred lines further, both in respect of the characteristics mentioned in the Test Guidelines and by using methods such as electrophoresis, heterosis tests and test crosses in order to learn more about the genetic distance between those lines, and also, if necessary, make comparisons at the level of the hybrid material.

6. A systematic examination of the new inbred lines under the proposed new procedure had been made in 1987; results at the level of hybrids were not yet available, therefore. Nevertheless, the procedure had the advantage of concentrating efforts on the inbred lines rather than on hybrid material, in other words on a more limited number of varieties that in addition were homogeneous and allowed use of simpler testing and statistical methods, rather than on a large number of varieties that were heterogeneous in the case of three-way and double-cross hybrids, and many of which would be withdrawn from the tests at the end of the first year.

7. Concerning the application of this procedure to species other than maize, Mr. Guiard pointed out that it required a good knowledge of the genetics of the species concerned. It was not envisaged for the time being to extend the procedure to species such as sunflower or sorghum.

8. Dr. J.-M. Elena (Spain) said that the Spanish authorities were favorably disposed towards that approach and would be prepared to introduce it for the purposes of national listing for maize, sorghum and sunflower.

9. Dr. G. Fuchs (Federal Republic of Germany) said that he sympathized with the wish of the French authorities to simplify work and make it more effective. However, he had reservations about the proposed procedure since a first application of it, on the basis of data collected according to the traditional procedure, had shown that there was no simple relation between distinctness at the level of the parental lines and distinctness at the level of the hybrids. One of the reasons for that might be the fact that for inbred lines the breeding objective was a good combination ability for agronomic features, and that there were presumably also differences in combination ability for morphological characteristics. Differences in climatic conditions might be another explanation. In conclusion, Dr. Fuchs felt that the proposed procedure needed further experimentation and discussion before a conclusion could be reached as to its feasibility.

10. Mr. J.K. Doodson (United Kingdom, Chairman of the Technical Committee) said that the Technical Committee could not agree with the ASSINSEL motion. However, it recognized the practical problems that arose in the examination of hybrid varieties and welcomed the work being undertaken in France. The general conclusion of the previous discussions of the Technical Committee was that further discussions should take place in the Technical Working Party for Agricultural Crops once sufficient experience had been gained on the proposed procedure.

11. Concerning the compatibility of the proposed procedure with the provisions of the Convention, Dr. G. Fuchs (Federal Republic of Germany) recalled that the variety that was the subject of an application for protection had to be distinct according to Article 6(1)(a) of the Convention and had to be examined according to Article 7(1). Consequently, there would not be any problem if the procedure were used to screen candidate varieties or if it led to an undisputable conclusion as to their distinctness. There would be an arguable need to amend the Convention, however, if the second condition were not satisfied, in other words if "identical hybrids" were to be protected on the grounds of their being derived from different inbred lines.

12. In conclusion, it was noted that the follow-up would consist in:

(i) hearing the opinions of the interested circles at the third Meeting with International Organizations, on October 12 and 13, 1987;

(ii) the Technical Working Party for Agricultural Crops and the Technical Committee examining further, on the basis of more detailed data, the technical aspects of the proposed procedure;

(iii) the Administrative and Legal Committee examining thereafter, if necessary, the legal implications of the proposed procedure.

Minimum Distances Between VarietiesIntroduction

13. Discussions were based on documents CAJ/XVIII/3, CAJ/XIX/2 and CAJ/XXI/3, and on paragraphs 60 and 61 of Annex I to document TC/XXIII/3.

General Discussion

14. Mr. F.W. Whitmore (New Zealand) said that it was believed in his country that the present UPOV criterion for distinctness, based on the statistical significance of the difference, could lead to the acceptance of differences that were sometimes very small. He suggested that consideration be given to fixing a more meaningful minimum difference, for example as a certain proportion of the total range of variation of the characteristic concerned.

15. Mrs. V. Silvey (United Kingdom, Chairman of the Technical Working Party on Automation and Computer Programs) agreed on the principle of the proposal. Indeed, under the present rules, very small differences could reach the required level of significance if there was almost zero variation within the varieties. She suggested therefore that the problem be referred to the Technical Working Party on Automation and Computer Programs.

16. Mr. J. Guiard (France) said that in the proposed procedure for the examination of hybrid varieties of maize, it was envisaged that differences that were significant at the 0.05 threshold instead of the requisite 0.01 would be accepted, but with the characteristic concerned being brought into the lower group. Such a difference would then also contribute to the decision on distinctness. Mr. Guiard felt that that approach, which was also envisaged for fodder plants in the United Kingdom, was interesting and deserved further exploration.

17. Mrs. V. Silvey (United Kingdom, Chairman of the Technical Working Party on Automation and Computer Programs) considered the approach to be sensible and also in accord with a view expressed by the experts from the Netherlands in document CAJ/XXI/3. Indeed the approach was being examined in the United Kingdom in respect of grasses, for it offered a solution to what appeared to be a genuine practical problem: that of two varieties that could be seen by eye to be different but for which none of the recorded individual differences met the required level of significance. Mrs. Silvey thought that the Technical Working Party on Automation and Computer Programs could be of assistance in that respect by examining the possible methods of multivariate statistical analysis.

18. Mr. H. Kunhardt (Federal Republic of Germany) recalled that the question of minimum distances between varieties was also related to the scope of protection, and therefore to the value and effectiveness of the title of protection. Statistics produced essential elements in support of a decision, but those elements had to be the subject of a further decision as to their relevance in the light of the purpose of the Convention. In that respect, breeders' organizations increasingly claimed that the statistically significant differences offered too small a scope of protection, in particular where they concerned a characteristic of little practical relevance. There then arose the question whether one should not establish the minimum distances in a differentiated manner, according to the type of characteristic.

19. That in turn led to the question of the definition of the "important characteristic." In that connection, Mr. Kunhardt said that the first sentence of Article 6(1)(a) of the Convention gave rise to different interpretations and practices: according to the first, a set of differences, none of which would be clear in terms of the Convention, would be sufficient to establish distinctness if the combination of the differences were clear; according to the second, there would have to be at least one clear difference. The first would allow very small distances between varieties, and, if consideration were to be given to increasing the distances, it would be useful to consider changing the interpretation of the Convention to the second.

20. Mr. J. Guiard (France) considered that significant differences at the 0.01 threshold relating to quantitative characteristics were often more relevant, in the context of the variety notion, than differences relating to qualitative characteristics. Indeed, taking into account the simple genetic basis of some qualitative characteristics, a breeder could quite easily "convert" a variety in respect of one such characteristic, which made protection rather meaningless for the original breeder.

21. Dr. G. Fuchs (Federal Republic of Germany) wished to return to the classification of characteristics appearing at the foot of page 2 and the top of page 3 of document CAJ/XXI/3. He recalled that for a characteristic to be used to establish the distinctness of a variety, the variety had also to be homogeneous (or to show a controlled heterogeneity linked to its genetic background) and stable in respect of that characteristic. For a characteristic to be used for identification purposes, however, the variety had also to fulfill the above conditions.

22. Mr. H. Kunhardt (Federal Republic of Germany) added that the efficacy of protection depended on the precision of the description. That implied that the variety concerned had to be homogeneous and stable, as mentioned by Dr. Fuchs, in all characteristics that were considered for distinctness purposes and appeared in the description, and in those only. The use of other characteristics (and particular methods) for the purpose of identification (in other words for ascertaining whether a sample belonged to a given variety) or of verification of stability could only lead to an indirect, inconclusive finding. In particular, decisions affecting the plant breeder's right, for example the decision to declare the right forfeit, would have to be based solely on the characteristics that formed part of the description of the variety.

23. Mrs. V. Silvey (United Kingdom, Chairman of the Technical Working Party on Automation and Computer Programs) stated that new technology had brought about valuable methods and required new thought to be given to established principles. Mr. H. Kunhardt (Federal Republic of Germany) considered however that such thought should not lead to a grouping of characteristics, which in any event would be difficult to define.

Questions Set Out in Document CAJ/XXI/2

24. Introduction.- The questions were as follows:

Question 1: In the light of the issues relating to the definition of maize hybrids (see document CAJ/XIX/5), would it be possible in testing work to differentiate between characteristics used for the distinguishing of varieties and characteristics used for identification of seed and plant material?

Question 2: What would be the consequences of dividing the characteristics into those two groups?

Question 3: Are the distances between protected varieties (and hence the areas of protection given by plant variety rights) becoming too small, and if so, what changes could be made to the Convention to provide for greater distances and larger areas of protection?

Question 4: Possible use of new methods, e.g. electrophoresis, for determining the distinctness of new varieties, taking into account [questions 1, 2 and 3] above.

Five delegations had also been asked to reply to these questions in the light of specific Test Guidelines. Reports were made by the Delegations of Denmark, France, the Federal Republic of Germany, the Netherlands, New Zealand, the United Kingdom and the United States of America. They are set out in the following paragraphs.

25. Denmark.- Question 1 could not be considered in relation to the Test Guidelines for Sour Cherry because of the limited number of applications, but only in relation to the Test Guidelines for Christmas Cactus. The latter were relatively new and did not contain unnecessary characteristics. It was therefore not possible to distinguish two groups of characteristics. Concerning question 3, it was noted that breeders' organizations tended to request larger minimum distances for ornamental species. Their wish could be met by removing some characteristics from the list of those that were used for establishing distinctness. Finally, in relation to question 4, it was not considered possible in Denmark to use new methods of distinctness testing for the moment.

26. France.- Question 1 had been considered on several occasions in the past. It amounted to distinguishing from all other characteristics those that were important for distinctness purposes; it called for a classification methodology that met one or more predetermined objectives. It was possible to reply affirmatively to the question, in particular since various UPOV bodies had:

(i) implicitly or explicitly rejected characteristics used in one country but ignored in another (characteristics that were "secondary" or too prone to fluctuation under certain growing conditions, etc.);

(ii) declared that they did not want to use, for certain species, the biochemical characteristics that were in current use in some other respects (for example the electrophoregrams of the gladins in cereals);

(iii) taken note of the fact that the phenotypic expression of genetic differences remained unknown.

However, such a classification was somewhat arbitrary (even if based on expert opinions) and open to criticism. A hierarchical classification seemed more rational given the present state of the art.

27. Such a classification would result in stronger protection of the breeder's right in the case of species for which there were many morphological and physiological characteristics that could be used (question 2). On the other hand, for species with few such characteristics, it could make distinctness more critical and more difficult to establish.

28. Users would generally consider the distances between varieties to be too small when they owned a dominant variety, and would deplore the use of too large distances when they were striving for a variety that would enable them to catch up with their competitors (question 3). In practice, it might be that too small distances had been retained for some species and varieties. But it would not be necessary to amend the Convention as a corrective measure: it was for the testing and decision-making authorities to ensure the use of sufficient distances, determined on the basis of expert opinions and with due account being taken of the state of the art.

29. The classification would be more credible if it met a number of clearly defined criteria and objectives that would reinforce the definition of "important characteristic" and make so-called scientific plagiarism more difficult. The following deserved consideration in that connection:

(i) The fact of declaring important a characteristic with a simple inheritance, that was easily transferable from one variety to another, contributed to encouraging plagiarism;

(ii) Insufficient distance between two states of expression of a characteristic that was considered important had the same effect;

(iii) Systematic use of a minimum difference by a fixed number of states of expression to distinguish two varieties, whatever the characteristic and the states observed, gave rise, or was likely to give rise, to scientific plagiarism.

The classification should probably be based on the inheritance of the characteristics, the magnitude of their fluctuation and their reliability (see document CAJ/XX/7).

30. Finally, the use of new methods was considered very desirable whenever it led to work simplification or to better control of the assessment of the differences between varieties (question 4). It was necessary for species with few useful characteristics. In the case of species with many characteristics, it would have a complementary purpose, confirming a more or less aleatory difference recorded on "ordinary" characteristics. It might also replace, at some time in the future, the observation of characteristics whose expression was limited in time and variable, such as anthocyanin coloration.

31. Federal Republic of Germany.- On the basis of the Test Guidelines for Rye and Pelargonium, it was found that distinction between characteristics according to question 1 and on the basis of their functional relevance would be quite arbitrary. Another possibility would be to increase the minimum distance required for each characteristic. Concerning question 2, it was clear that a reduction in the number of characteristics would reduce the possibilities for distinguishing varieties and thereby widen the perimeter of protection. But then there should also be a homogeneity and stability requirement for the so-called identification characteristics if they were to fulfill their purpose. A widening of the protection perimeter could also be achieved by requiring different minimum distances according to the purpose of the characteristic. Both avenues would increase the burden on the breeder in that the requirements for homogeneity and stability would be more stringent. In the second case, the testing procedure would also be more complex.

32. Amendment of the Convention (question 3) would not be necessary. More generally, the attempt to move the distinctness criterion towards the inventive step concept applied in patent law, by placing the emphasis on the functional characteristics and perhaps also by increasing the minimum distances, was not considered to be the correct solution. Plant breeding had to live with relatively small distances, because progress in that area was in general achieved in a succession of small steps. However, one amendment that might be envisaged, for the purpose of clarification, was the requirement of a clear difference in respect of at least one characteristic.

33. Concerning the new methods (question 4), it was noted that their use for identification purposes implied that, from a technical point of view, they could also serve to establish distinctness, in other words to identify the presence or absence or amount of a given protein. However, such use required the methods also to become a routine tool among breeders. More generally, the methods concerned afforded insight into the genetic make-up of the varieties, irrespective of whether and how the corresponding characteristic was expressed under particular climatic conditions. One could imagine distinctness established in the future on the basis of the genetic make-up rather than the state of expression of mainly morphological characteristics.

34. Netherlands.- Concerning questions 1 to 3, reference was made to document CAJ/XXI/3. As for question 4, the authorities of the Netherlands were prepared to use electrophoresis for identification purposes, but not to go further for the time being.

35. An application of the principles set out in document CAJ/XXI/3 to the Test Guidelines for Perennial Ryegrass, Lettuce and Alstroemeria had given the following results: in the case of Perennial Ryegrass, 9 characteristics would be of the determinant type and 4 of the semi-determinant type; in the case of Lettuce, the figures would be 32 and 7 respectively, and in the case of Alstroemeria 24 and 3 respectively.

36. New Zealand.- Experience had shown in New Zealand that there was not much to be gained by differentiating characteristics as indicated in question 1. There was no need to amend the Convention to solve a possible problem of too small minimum distances (question 3): the text of the Convention was a flexible one that gave the competent authorities the possibility of solving any such problem in a practical way. Finally, new methods (question 4) had to be assessed according to their merits.

37. United Kingdom.- The United Kingdom authorities would prefer to have no distinction made between characteristics as indicated in question 1. As far as the Test Guidelines for Chrysanthemum were concerned, they could find five characteristics that would be used primarily for identification purposes, but the proposed revision was expected to result in their deletion, together with a dozen other characteristics. In reply to question 3, they also felt that the distances between varieties were becoming too small in the case of ornamental plants.

38. The authorities of the United Kingdom advocated an amendment of the General Introduction to the Test Guidelines to state the conditions that a characteristic would have to meet in order to be considered important within the meaning of Article 6(1)(a) of the Convention. Those conditions could be the following in the case of ornamental plants:

- (i) A difference in the expression of the characteristic must be sufficient, in other words the presence of other differences must not be required to justify recognition of the existence of a new variety;
- (ii) The characteristic must be capable of precise recognition and description;
- (iii) The characteristic must be reliable;
- (iv) Varieties must be expected to be homogeneous with respect to the characteristic;
- (v) Harmonized and standardized methods must exist for its observation;
- (vi) The cost of the observations must not be unreasonable;
- (vii) The observations must be able to be completed without prolonging the tests unduly;

The following three conditions might also be included:

- (a) Different states of expression of the characteristic must be recognizable in the normal course of multiplication, cultivation or use of the varieties;
- (b) The characteristic must be needed for distinguishing varieties;
- (c) Where the decision on distinctness is to be based on an additional characteristic, the latter must satisfy the same criteria as ordinary characteristics.

39. Concerning new methods (question 4), it was acknowledged that there was some commercial interest in DNA fingerprinting for chrysanthemums for identification purposes. The authorities felt that it was not possible to go further than that for the time being.

40. United States of America.- It was felt that question 1 was of little relevance in the case of the United States of America, which had the policy of accepting any kind of characteristic, provided it was scientifically reasonable. That meant that there was no obstacle to the use of new methods other than the condition mentioned (question 4). As far as the measure of the distance between varieties was concerned, it was felt that there was a need to agree that it should be great enough to be meaningful and prevent plagiarism. Such agreement did not require any amendment of the Convention.

41. Discussion.- The Chairman noted that the question of minimum distances between varieties had to be dealt with species by species, and that some new ideas had been put forward in the above reports. He therefore suggested that the Technical Working Parties should be informed of the discussions, it being understood that the Technical Working Party on Automation and Computer Programs would examine in greater detail some of the questions falling into its field of competence.

42. Mr. J. Guiard (France) felt that the report presented on behalf of the United States of America was important as it showed that it was difficult to make a distinction between characteristics used for distinctness purposes and characteristics used for identification purposes, and that it was difficult to understand the rationale of such a distinction. On the other hand, minimum distances were defined characteristic by characteristic in the United States of America; the General Introduction to the Test Guidelines also provided general rules that had the same effect. Mr. Guiard said that it would be very difficult for a technical expert to decide in the abstract on individual minimum distances for each characteristic; he felt that the notion of minimum distances had to be defined globally, at the level of the variety.

43. Mr. M. Heuver (Netherlands) proposed that the professional organizations should be given the possibility of discussing the question of minimum distances in a practical context with experts from the testing authorities. In that connection, he proposed that workshops relating to four or five species be organized on the premises of the testing authorities.

44. The Committee agreed to the proposal.

45. Mr. H. Kunhardt (Federal Republic of Germany) said that the meeting should attempt to clarify the areas of emphasis for the work of the Technical Working Parties and the discussions with professional organizations. In his view, those areas of emphasis should be the following:

(i) It should be made clear that the idea of distinguishing characteristics used for distinctness purposes and characteristics used for identification purposes should not be pursued: the statutory decision that was called for under the Convention was whether the variety was distinct on the basis of the relevant characteristics;

(ii) Where distances between varieties were too small, an examination should be made of the possibilities for enlarging the distances and of the consequences that this would have;

(iii) More generally, a study should be made of the system used for defining the minimum distances; the question was whether the present system, based on statistical significance, should be retained, whether there should be a lower limit for difference, whether that limit should be fixed individually for each characteristic and how it should be set;

(iv) More generally also, a study should be made to ascertain whether there was a system capable of securing the rights of the breeders by means of appropriate minimum distances and at the same time ensuring that breeding progress was not hampered.

[Annex VI follows]

ANNEX/ANNEXE/ANLAGE VI

ADDRESSES OF NATIONAL AUTHORITIES OF INDIVIDUAL UPOV
MEMBER STATES RESPONSIBLE FOR PLANT SANITARY
REGULATIONS FOR THE IMPORTATION OF PLANT MATERIAL
(as of April 15, 1988)

ADRESSES DES RESPONSABLES CHARGES DES MESURES DE CONTROLES
PHYTOSANITAIRES A L'IMPORTATION DE MATERIELS VEGETAUX
DANS LES DIFFERENTS ETATS MEMBRES DE L'UPOV
(état au 15 avril 1988)

ADRESSEN VON NATIONALEN BEHOERDEN DER EINZELNEN VERBANDSSTAATEN
DER UPOV, DIE FUER DIE PHYTOSANITAEREN VORSCHRIFTEN HINSICHTLICH
DER EINFUHR VON PFLANZENMATERIAL ZUSTAENDIG SIND
(Stand vom 15. April 1988)

BELGIUM/BELGIQUE/BELGIEN

Ministère de l'Agriculture
Service de la Protection des Végétaux
14ème étage
Manhattan Center - Office Tower
Avenue du Boulevard 21
B - 1210 Bruxelles

DENMARK/DANEMARK/DAENEMARK

Control of harmful plant diseases and insect pests/Contrôles des maladies
nuisibles et des insectes parasites des plantes/Kontrolle gefährlicher Pflan-
zenkrankheiten und Insektenschädlinge

Statens Plantetilsyn
Gersonsvej 13
DK-2900 Hellerup

Telephone: 01-620787

Exportation of seeds of forest trees, field seeds or garden seeds/Exportation
de semences d'arbres forestiers et de semences de plantes agricoles et horti-
coles/Ausfuhr von Saatgut von Forstbäumen, landwirtschaftlichen und gartenbau-
lichen Kulturen

Statsfroekontrollen
Skovbrynet 20
DK-2800 Lyngby

Telephone: 02-883366
Telex: 02-883366

Exportation of forage grain and bread grain and wood/ Exportation de céréales
fourragères et panifiables et de bois/Ausfuhr von Futtergetreide, Brotgetreide
und Holz

Statens Skadedyrlaboratorium
Skovbrynet 14
DK-2800 Lyngby

Telephone: 02-878055

FRANCE/FRANCE/FRANKREICH

Ministère de l'Agriculture
Service de Protection des Végétaux
175, rue du Chevaleret
F-75646 Paris Cedex 13

Telephone 45.84.13.13

GERMANY (FED. REP. OF)/ALLEMAGNE (REP.
FED. D')/DEUTSCHLAND (BUNDESREPUBLIK)

Bundesministerium für Ernährung,
Landwirtschaft und Forsten
Referat 313 (Herr Dr. Günther)
Postfach 14 02 70
D-5300 Bonn 1

Telephone: 0228 / 5291

Telefax: 529-4262

Telex: 886844

HUNGARY/HONGRIE/UNGARN

Ministry of Agriculture and Food
Department of Plant Protection and
Agrochemistry
P.O. Box 1
H-1860 Budapest

Ministry of Agriculture and Food
Plant Protection and Agrochemistry
Center
P.O. Box 127
H-1502 Budapest

IRELAND/IRLANDE/IRLAND

Plant Protection Service
Department of Agriculture and Food
Kildare Street
Dublin 2

Telephone: 789011

Telefax: (01) 616263

Telex: 93607 agri ei

ISRAEL

Mr. H. Chen
Department of Plant Protection and
Inspection
Ministry of Agriculture
P.O. Box 78
Bet Dagan 50-250

Telephone: 03-981150 (direct)

or: 03-981211 (exchange)

or: 03-981162 (Dr. Hoffman-Hadar)

Telex: 341872 vsah il

ITALY/ITALIE/ITALIEN

Ministero dell'agricoltura e delle
foreste
Direzione generale della produzione
agricola
Divisione III
I-00187 Roma

Telephone: 06-4665
Telefax: 06-461707
Telex: 610148
or: 622343

JAPAN/JAPON/JAPAN

Plant Protection Division
Agricultural Production Bureau
Ministry of Agriculture, Forestry and
Fisheries
100, Chiyoda-ku, Kasumigaseki
1-2-1 Tokyo

Telephone: 03-502-8111

NETHERLANDS/PAYS-BAS/NIEDERLANDE

Plantenziektenkundige Dienst
Post Box 9102
NL-6700 HC Wageningen

Telephone: 08370 - 96911
Telefax: 08370 - 21701
Telex: 45163

NEW ZEALAND/NOUVELLE-ZELANDE/
NEUSEELAND

Dr. A.E. Rainbow
Officer-in-Charge
Lynfield Plant Protection Centre
P.O. Box 41
Auckland

Telephone: (09) 676 026
Telefax: (09) 674 172
Telex: 60525 agmaf nz

SOUTH AFRICA/AFRIQUE DU SUD/
SUEDAFRIKA

Department of Agricultural Economics
and Marketing
Directorate of Plant and Seed Control
Private Bag X179
Pretoria 0001

SPAIN/ESPAGNE/SPANIEN

Ministerio de Agricultura Pesca y
Alimentacion
Subdireccion general de Sanidad vegetal
Juan Bravo, 3-B
E-28006 Madrid

SWEDEN/SUEDE/SCHWEDEN

Lantbruksstyrelsen (= National Board of
Agriculture)
Mr. Gunnar Gränsbo
Växtskyddsenheten (= Plant Health
Division)
S-551 83 Jönköping

Telephone: 46 - 36 16 94 20
Telefax: 46 - 36 19 21 31
Telex: 2401 - 8355236

SWITZERLAND/SUISSE/SCHWEIZ

Eric Joseph
Bundesamt für Landwirtschaft
Sektion für Pflanzenschutz
Mattenhofstrasse 5
CH-3003 Bern

Telephone: 031 / 61 25 65
Telefax: 031 / 612634
Telex: 912889 evd ch

UNITED KINGDOM/ROYAUME-UNI/
VEREINIGTES KOENIGREICH

England, Wales:

Plant Health Division
Ministry of Agriculture, Fisheries
and Food
Great Westminster House
Horseferry Road
London SW1P 2AE

Telephone: 01 - 216 - 6311
Telefax: 01 - 216 - 6828
Telex: 21271/21272

Scotland:

Plant Health Division
Department of Agriculture
Chesser House
500 Gorgie Road
Edinburgh EH11 3AW

Telephone: 031 - 443 - 4020
Telefax: 031 - 443 - 4020 ext. 2200
Telex: 72162/727478

Northern Ireland:

Plant Health Division
Department of Agriculture
Dundonald House
Upper Newtownards Road
Belfast BT4 3SB

Telephone: 0232 - 650111
Telefax: 0232 - 659 - 856
Telex: 74578