



TWF/41/30 Rev.

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR FRUIT CROPS

Forty-First Session

Cuernavaca, Morelos State, Mexico
September 27 to October 1, 2010

REVISED REPORT

adopted by the
Technical Working Party for Fruit Crops

Opening of the Session

1. The Technical Working Party for Fruit Crops (TWF) held its forty-first session in Cuernavaca, Morelos State, Mexico, from September 27 to October 1, 2010. The list of participants is reproduced in Annex I to this report.
2. The TWF was welcomed by Ms. Enriqueta Molina Macias, Director General of National Service of Seed Inspection and Certification (SNICS), by Mr. José Arnulfo del Toro Morales, Representative of the Ministry of Agriculture (SAGARPA) and by Mr. Bernardo Pastrana Gómez, Secretary of Agricultural Development Department of the Government of the State of Morelos. The welcome addresses are provided in Annex II to this report.
3. The session was opened by Mrs. Bronislava Bátorová (Slovakia), Chairperson of the TWF, who welcomed the participants and, in particular, new participants to the TWF.

Adoption of the Agenda

4. The TWF adopted the revised agenda as reproduced in document TWF/41/1 Rev.

Short Reports on Developments in Plant Variety Protection*(a) Reports from Members and Observers*

5. Ms. Enriqueta Molina Macias, Director General of National Service of Seed Inspection and Certification (SNICS), made a presentation on the plant variety protection system in Mexico, a copy of which is reproduced in Annex III to this document.

6. The expert from Australia reported that the number of applications received for the 2009/2010 financial year was 345, compared to 324 in the 2008/2009 financial year. In the same period, 211 grants were issued compared to 267 in the previous year. Although a detailed analysis had not yet been done, the lower number of grants was believed to be due, in part, to the cyclic nature of processing applications and the focus on other parts of the process when the demand on those increased. In addition, variations to details of an application could cause a statutory delay in granting by at least 6 months. Over the last 12 months, 19% of applications filed had been for fruit varieties. That number was comparable to the previous year, which was also 19%. The genera with the most applications were *Prunus* (40 applications) and *Malus* (8 applications). Other genera included *Citrus*, *Actinidia*, *Rubus*, *Vitis*, *Olea* and *Musa*.

7. The expert from Brazil reported that the PVP Office of Brazil, had received 2,105 applications since 1998, mainly for agriculture crops: 1,401. For fruit crops, the Office had received 104, since 1998. There were 39 applications under examination, 61 titles and 4 applications rejected. Further information was available on the website (www.agricultura.gov.br (serviços>proteção de cultivares>cultivares protegidas). Brazil, subject to the decision of the Council of UPOV, would host the next sessions of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) and the Technical Working Party for Agricultural Crops (TWA) in Brasilia in 2011. Brazil also planned to organize a two-day GAIA training course in conjunction with the BMT session. The Office was promoting a distance training course on PVP in order to train more than 400 legal representatives and breeders, who were using or intended to use the PVP system of Brazil. A revised PVP law was still awaiting signature by the President in order to be sent to the Congress for voting.

8. The expert from China reported that, in 2009, the Plant Variety Protection Office in the Ministry of Agriculture had received 992 applications, of which 33 were fruit crops. As of August 31, 2010, a total of 7,246 applications had been filed, of which 3,251 titles had been granted. For fruit crops, as of August 31, 2010, 225 applications had been received, accounting for around 3 % of the total applications. The largest number of applications for fruit crops were pear (47), followed by apple (38), kiwifruit (33), and grapevine (28). New national testing guidelines for 80 genera and species were being developed. In addition, the DNA identification standards for 14 genera and species, including 6 agricultural crops, 6 vegetables, 1 ornamental plant, and 1 fruit crop (Apple), were being established. China had hosted the International Seminar on Plant Variety Protection and Farmers' Rights in April 2010, which had been attended by about 70 participants from North-East Asia (China, Republic of Korea and Japan) and 7 East Asian countries, as well as from India and the USA.

9. The expert from the European Union reported that, in 2009, the Community Plant Variety Office (CPVO) had received 2,755 applications for Community plant variety rights (CPVR), a decrease of 8% from the previous year and, for the first time in the CPVO's

history, there had been a drop in annual applications. There were 181 applications in the fruit sector (same number as in 2008), the most important species were peach, followed by apple and strawberry. Figures so far in 2010 showed the same tendencies as the previous year. Since the end of March 2010, the CPVO had been able to offer to applicants the possibility of e-filing, which enabled applicants to file an application for Community rights on-line via a secured site. Until recently, that was possible for the top species in each crop sector, with peach being the chosen fruit species, but as from the beginning of October, that service would be extended to strawberry, apple, apricot, sweet cherry, Japanese plum, pear, grapevine, raspberry and blueberry. The system was presented to the network of EU examination offices on June 2, 2010, so that, if they wished, National authorities were free to use this system for their national purposes. At a later stage, it was the intention that the system would be proposed for use by members of UPOV. Concerning co-operation between EU Member States authorities and UPOV, the CPVO had established since several years, a centralized database of variety denominations. In addition to the possibility for National EU authorities to use this database for the testing of the similarity of denomination proposals, since February 2010, the CPVO also offered an “advice” service on the suitability of a proposed variety denomination should such consultation be requested from an EU authority. The CPVO was pleased to host in June this year the 28th session of the Technical Working Party on Automation and Computer Programs (TWC) in June 2010. The CPVO would soon start analyzing, with the assistance of its fruit examination offices, possible ways of reducing costs and improving the efficiency of DUS testing in fruit crops. Areas under consideration were: the constitution and maintenance of variety reference collections; reducing the number of necessary observation (fruiting) periods from two to one in certain species or type of varieties; submission of more developed or higher quality plant material in order to reduce the number of establishment years. With respect to research and development (R&D) projects in the fruit sector, the CPVO co-funded project “Management of Peach Reference Collection” was nearing completion. The project partners from the four entrusted examination offices for peach (France, Spain, Italy, Hungary) had almost finalized work on a phenotypic database of 504 peach varieties of common knowledge, as well as the corresponding photo database and genetic map of the correlation between all those varieties. Twelve of those varieties also formed the basis of a ring trial between the project partners to compare the reliability of results. Results thus far were encouraging. The project was due to be finalized and concluded upon in June 2011, at which time the project coordinator (GEVES), together with CPVO, would analyze how to implement best the findings of the project, so as to improve the efficiency of DUS testing in peach via a more targeted selection of reference varieties. Following the implementation of the “one key, several doors” principle, whereby DUS test reports produced by any authority in the EU were accepted for listing or protection purposes throughout the Community, an independent technical audit of the CPVO had started operations in September 2008. The first quality audits, with the assistance of external technical audit experts, had started in spring 2010 and, since then, several examination offices had been audited. Training for technical auditors had been held at the CPVO on June 1, 2010. On 13 September 2010, the European General Court of Justice annulled a decision of the Board of Appeal of the CPVO and, thereby, concurred with the CPVO’s view that the CPVO has discretion to allow a second sample of plant material in the application procedure. Case T-135/08 for the apple mutation variety ‘Gala Schnitzer’ had a long and complicated history in relation to its technical examination since the application for Community rights was filed in 1999, but, at the end, the CPVO found itself in the situation of defending its original decision, as well as that of its Board of Appeal, which had annulled the CPVO’s original decision to grant Community rights for ‘Gala Schnitzer’. The case would now be referred back to the CPVO’s Board of Appeal; amongst other things the Board would also be requested to declare itself on the distinctness of ‘Gala Schnitzer’ in relation to the closest

variety of common knowledge 'Baigent', since it did not do so during the Appeal's oral proceedings in 2007. A detailed description of the case could be found via the CPVO's website.

10. The expert from France reported that the *Groupe d'étude et de contrôle des variétés et des semences* (GEVES) was now certified for quality management, under NF EN ISO 9001:2008, for the following activities: study and control of new plant varieties in the framework of national and European Union catalogues and PBR, biochemical and molecular analysis on varieties and seeds, and was extending progressively those procedures to its activities. The main GEVES field crop DUS unit was now running its DUS and VCU activities in the north of Angers –Loire valley. GEVES was conducting DUS fruit tests for *Malus*, *Pyrus* and *Prunus*, as well as *Vitis* for PBR and listings, required for entry in the certification scheme. The main fruit crops were apricot, apple, cherry and peach. About 100 applications were received per year. GEVES managed approximately 500 tests each year, and the DUS examination took an average of 4 years. A significant part of the DUS GEVES examinations were conducted on behalf of the CPVO and European national authorities. The DUS examinations were delegated to DUS teams in France and to other European Union authorities (Germany, Italy, Spain). In France, four Fruit testing centers were concerned: Angers (apple and pear), Avignon (peach and apricot), Bordeaux (cherry) and Montpellier (grape). Those centers assured the maintenance of large and reliable living DUS reference collections in the field: 4,500 varieties were maintained (1,700 for apple, 700 for pear, 1,800 for plum, cherry, and apricot) and 300 rootstocks. Special attention was given to the sanitary status of the material in the DUS collections. Peach and apricot were maintained under insect-proof plastic tunnels. Programs were underway for DNA characterization of varieties, in order to deliver tools for structuring the reference collection and for the varietal control of certified material of fruits and forest plants (*Prunus*, *Malus*, *Vitis*, *Castanea*, *Olea*, *Populus* and Aracaceae and Palmae). GEVES and the *Institut national de la recherche agronomique* (INRA) were conducting methodological projects to permit the development of fruit DUS examinations with new challenges. Those included the optimization and reliability of reference collections and minimal distance requirements. The goal of the CPVO Peach Program was to optimize DUS reference collections, such as management by descriptions, photographs and DNA data (France, Hungary, Italy, Spain). At European Union level, GEVES was following the evolution of fruit plant marketing regulations. In particular, the aim was to create an EU list of fruit varieties authorized to be marketed on the basis of the compilation of the national catalogue of each member State.

11. The expert from Germany reported that, with respect to fruit DUS testing, 122 DUS tests were being carried out on 13 different species, 40 of which had just been started with plant material submission in 2010 (12% less than the previous year). The most important were: *Vaccinium Corymbosum* (27) *Fragaria x ananassa* (25); *Malus x domestica* (20); *Rubus idaeus* (19). 80% of the DUS tests were carried out on behalf of the Community Plant Variety Office (CPVO). The Bundessortenamt was also involved in the implementation of EU Directive 2008/90/EG: supporting the relevant working group in the EU Committee and elaborating necessary amendments in the national Fruit Certification Decree. With regard to international cooperation, the office had received a delegation from Turkey in April 2010; a delegation from Estonia in May 2010 and a delegation from Serbia in September 2010.

12. An expert from Israel provided information concerning plant variety protection in Israel, a copy of which is reproduced in Annex IV to this document.

13. The expert from Japan reported that, in the 2009 fiscal year, the PVP Office had received 1,112 applications, of which 61 were fruit crops. Blueberry had increased especially. In the same period 1,355 titles were granted, 37 of which were for fruit crops. The application number per fiscal year had been decreasing for the previous two years. Until March 31, 2010, the total number of applications was 24,986, of which 19,509 titles had been granted. Ornamental plants accounted for 78.8% of the total applications, fruit crops 5.3%. The main type of applicant varied according to crop; the main type of applicant of fruit crops was individuals. The number of applications for varieties bred in foreign countries had also been decreasing during the previous two years. The Japanese web-site in English had been improved somewhat. Three functions, searching for: varieties covered by PVP; Japanese national TGs; and varieties by flower color, had been introduced. ASEAN member countries, China, the Republic of Korea and Japan had established the East Asia PVP Forum (Forum) in 2008. The Forum had been continuing to enhance the PVP system in the region in cooperation with the UPOV Office and UPOV members. In July 2010, a TG meeting under the Forum was held in Thailand; experts from New Zealand and Mexico had participated and supported the meeting. In August 2010, a technical workshop under the Forum was held in Malaysia, with the participation of the UPOV Office. Information on the situation in Japan was provided, a copy of which is reproduced in Annex IV to this document.

14. An expert from Mexico reported that there had been no relevant changes in the Plant Variety Protection Office since the previous TWF session. Up to August 2010, 1,232 applications had been have been filed. Of those, 43.2% of the applications were for agricultural crops, 27.4 % for ornamentals, 17.9% for fruit crops, 11.3% for vegetables and others 0.2%. Of the total applications 21.3% were filed for maize, 16.4% for rose and 9.0% for strawberry. 67.9% are applications from other countries with the main country being the United States of America with 36.3% of the applications followed by the Netherlands with 15.1%, France with 6.3%, Germany 3.6% and others 6.7%.

15. An expert from Morocco reported that Law 9/94 on plant variety protection had been promulgated in 1994. That law was in conformity with the 1991 Act of the UPOV convention. For the implementation of that Law, two decrees had been published in the Official Journal in March 2002 and seven ministerial decrees had been published in the Official Journal on October 28, 2002. Law 9/94 concerned different genera and species. At that time, 79 species were offered protection. Further information concerning the distribution by species and by origin is provided in Annex IV.

16. The expert from New Zealand reported that the Plant Variety Rights Office had noticed a rise in questions and queries regarding the practices of the Office and testing protocols. The majority of those came from foreign breeders and reference was made to what was carried out by other authorities. That suggested a greater awareness among breeders of variety protection processes and an increasing understanding of technical and administrative matters. In response to a range of questions from foreign apple breeders, information on the testing of apples had been placed on the website regarding practices of the test centre. The Plant Variety Rights Office and IP Australia had begun a program of work with the objective of greater cooperation and harmonization between the two authorities. A high level plan had been agreed and specific technical and administrative projects had been outlined. The application numbers for fruit varieties had increased, with the majority for apple and kiwifruit. Applications for stonefruit varieties had decreased and breeders had indicated that changes to the importation requirements for *Prunus* had been a contributing factor. The centralized testing arrangements for kiwifruit were being reviewed with the objective of formalizing the existing agreement between the Plant Variety Rights Office and the test centre. Centralized

testing for avocado was also under review in order to improve the efficiency and quality of testing.

17. An expert from the Republic of Korea reported that the current status of PVP in Korea Seed & Variety Service. Of the 4,831 plant varieties for which applications had been received, 3,208 varieties had been granted protection, as of July 31, 2010. Those comprised the following: cereals (17.9%), vegetables (15.6%), fruits (4.5%), ornamentals (56.3%), industrial crops (3.8%), and other (1.9%). Fruit varieties accounted for 144 titles of protection, including apple (22.1%), pear (18.0%), peach (38.2%), grape (13.8%) and kiwifruit (6.2%). All plant genera and species were offered protection as of May 1 2009, with the exception of strawberry, raspberry, blueberry, cherry, tangerine, and sea plants. For that enlargement, applications for protection for 21 varieties of 5 new different species of fruits (sweet persimmon, Japanese plum, apricot, plum and loquat) had been received from May 1 to July 31, 2010, and were undergoing DUS testing. The Seed industry Law had been revised on May 1, 2010. The main points of that were the addition of a spore to seed definition, the deletion of notice for 60 days after DUS testing and the buildup of seed committee. The third session of the East Asian Plant Variety Protection Forum and International Seminar had been held in Seoul, Korea from April 28 to April 30, 2010. A PVP training course had been held for 16 days from July 1 to July 16 2010, in which eighteen participants from 9 countries, including Kenya, Cambodia and the Philippines had participated.

18. The expert from Slovakia reported that the legislation on plant breeder's rights, Law No. 22/1996, which amended the previous Law No. 132/1989, was cancelled and the new Law No. 202/2009, approved on April 29, 2009, came into force on June 1, 2009. In 2009, the Ministry of Agriculture had received 9 applications for plant breeder's rights and 20 titles had been issued. 34 titles had ceased to be in force and 417 titles were in force on December 31, 2009. The majority of applications concerned agricultural species, particularly cereals and maize. Since Slovakia had become a member of the European Union, there had been a significant decrease in the number of applications for plant breeders' rights and a reduction in the number of breeders of small fruit, with grapevine breeding representing the main area of activity. Plant breeder's rights had been granted for apple, strawberry, raspberry, apricot, black and red currant, plum and vine.

19. An expert from South Africa reported that, in South Africa, to be eligible for protection in terms of the PBR Act, the plants from which new varieties were developed should be declared by the Minister in accordance with the Act. The PBR Act in South Africa had been reviewed. At that time, there were approximately 360 taxa declared in terms of the PBR Act, which were grouped as follows: 53% ornamental crops, 27% agricultural crops, 10% fruit crops and 10% vegetable crops. 423 Plant Breeders' Rights had been granted for fruit, which represented 19% of all valid Plant Breeders Rights. The top fruit crops with valid Plant Breeders Rights in 2009 were: nectarine (82 varieties), apple (52 varieties), peach (55 varieties) and grape (49 varieties). The total number of varieties under consideration for Plant Breeders Rights was 493. The number of applications had increased significantly for kiwifruit over the previous year and first applications had been received for pomegranate. A collateral agreement had been signed between the Department of Agriculture, Forestry and Fisheries and the Agricultural Research Institute regarding the establishing of a stone fruit collection block.

20. An expert from Spain reported that Spain had developed DUS examinations on fruit varieties in 11 Official specialised Centres, and carried out this work for the purposes of

protection at the national level or in collaboration with the Community Plant Variety Office (CPVO), as well as for the national register of varieties. The main species involved for PBR were peach, mandarin, and strawberry. For the national register of varieties, the main species were vine, peach and olive. Information about registered or protected varieties was available for consultation at the official web of the Ministry: www.marm.es. During 2010, the new trends were: disease-resistance in apricot, seedless mandarins and new forms of peach. Spain planned to open DUS examination for new species such as pomegranate and Kaki. During 2010, the *Oficina Española de Variedades Vegetales* (OEVV) was involved in some important activities, such as the harmonization of procedures for examination Centres in line with the new accreditation program of CPVO, the training of experts and the European Union project for the management of data and reference collections of Peach. New regulations for multiplication material, its marketing and certification, was being developing by European Union and some links had been established with PBR matters; however, they had independent scopes. For example, CPVO protocols, or UPOV Test Guidelines were established as a compulsory reference for the Commercial Register of Varieties, and the same rule for denominations were used for both purposes. Also, a protected variety was now able to be included in the certification system and not just registered varieties. That meant that the frame of PBR of UPOV was useful for other objectives such as databases, DUS examination, etc, and that had contributed to improved harmonization.

21. The expert from the International Community of Breeders of Asexually Reproduced Ornamental and Fruit Plants (CIOPORA) reported that CIOPORA had established a working group on DUS at the annual general meeting in Sevilla, Spain, the aim of which was to analyze the current DUS system and “Minimal Distances” between varieties had already been identified as one important topic. The working group had held two meetings and its first task was to work on Test Guidelines to check on characteristics. In April 2010, CIOPORA had organized a “Breeders’ Meeting” in Santa Barbara, California, where some 32 participants, mainly fruit breeders based in the United States of America, had discussed, during one day, matters related to the enforcement of plant patents and trademarks. Concerning outside activities, CIOPORA had approached the Government in Egypt with regard to the establishment of an effective PBR system and had urged Egypt not to apply the so-called “farmers’ exception” on vegetatively reproduced ornamental and fruit varieties. CIOPORA had also commented on the Tanzanian Plant Breeders’ Rights Law, which it considered was, in general, in compliance with the 1991 Act of the UPOV Convention, but felt could still be improved in order to grant better protection for their varieties. At UPOV’s first ever Open Day, which was held in Geneva on June 5, 2010, CIOPORA had been represented by Mrs. Dominique Thevenon, AIGN®, and Mr. Bruno Etavard, Meilland International, who had introduced the work of breeders of ornamental and fruit varieties to the public. In March 2010, the expert reported that CIOPORA had organized a PBR Conference in Sevilla, Spain, the main topic of which was the co-existence of patents and plant breeders’ rights. The next International PBR Conference would take place on April 13, 2011, in Rome, Italy, and would be combined with the 50th Anniversary celebrations of CIOPORA.

22. An expert from the International Seed Federation (ISF) reported that, according to its President, Mr. Orlando de Ponti, ISF was paying a lot of attention to the business consequences of plant variety protection rights. ISF were carefully observing the various evolutions and trends in that domain, including PBRs and plant patents or patents on security filed or granted for native traits and derived varieties. Some of the national seed industry associations had recently taken the initiative of making recommendations on that matter to the decision makers and local authorities of their respective countries.

(b) Reports on Developments Within UPOV

23. The TWF received an oral report from the Office of the Union on the latest developments within UPOV, a copy of which is attached as Annex V to this document.

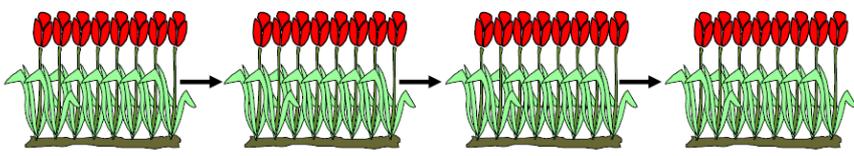
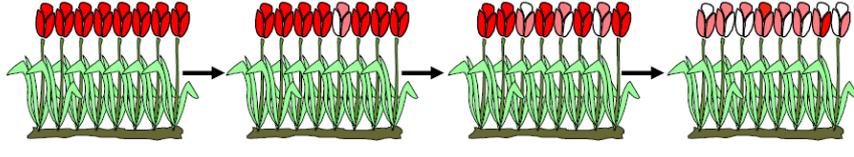
Molecular techniques

24. The TWF considered documents TWF/41/2 and BMT/DUS Draft 3 and agreed that document TGP/15 should be developed separately, but in parallel, to document BMT/DUS on the basis that document BMT/DUS would provide a report on the development and consideration of all models within UPOV and that document TGP/15 would provide guidance for the use of those models that had received a positive assessment and for which accepted examples could be provided, i.e. Models “Characteristic-specific molecular markers” (Section 3.1.1) and “Combining phenotypic [characteristics] and molecular distances in the management of variety collections” (Section 3.1.2) for the time being.

TGP documents*(a) New TGP documents**TGP/11: Examining Stability*

25. The considered document TGP/11 Draft 8, presented by Mr. Sergio Semon (European Union), in conjunction with document TWF/41/3 and an oral report on the conclusions of the Technical Working Party for Ornamental Plants and Forest Trees (TWO) at its forty-third session, held in Cuernavaca, Morelos State, Mexico, from September 20 to 24, 2010. The TWF made the following comments on document TGP/11/1 Draft 8:

1.	to add to the paragraph after the extract from the General Introduction with a text incorporating a reference to document TGP/10/1, Sections 4.2.2.4 and 4.2.3, in order to explain that differences in the expression of a characteristic that occur on a part of the plant are considered with regard to uniformity.
2.1.2	to emphasize the importance of the maintenance breeding effort in order to ensure that the variety will remain in conformity to the type and uniform.
2.1.2	to clarify that stability does not have to be examined by looking at the subsequent generation, i.e. stability could be examined by observation of material produced after several intervening cycles of propagation
2.1.2	to elaborate on why stability can be considered to be uniformity over time, with the aid of an illustration such as that provided in the DL-205 course as follows:

	<div style="text-align: center; border: 1px solid black; padding: 5px;"> <p>Stable variety</p> <p>The relevant characteristics of the variety <u>do not change</u> through the generations.</p>  <p>Original material Generation 1 Generation 2 Generation N</p> </div> <div style="text-align: center; border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Variety not stable</p> <p>The relevant characteristics of the variety <u>change</u> through the generations. The plant grouping no longer retains the expression of the relevant characteristics of the original variety.</p>  <p>Original material Generation 1 Generation 2 Generation N</p> </div>
2.3	to explain that the examples only relate to situations where the examination authority has chosen to ascertain whether the stability criterion has been met by candidate varieties as a matter of routine and that no examples are provided for cases of doubt concerning the stability of a particular variety
2.3	to add an example for the testing of stability of apple mutation varieties in New Zealand
2.3.4	to be deleted.
2.4	to be deleted.

26. The TWF noted that matters after the grant of the plant breeder's right, including the verification of the maintenance of the variety, was being considered separately by the Technical Committee and the Administrative and Legal Committee (CAJ).

(b) *Revision of TGP documents*

TGP/5: Experience and Cooperation in DUS Testing Section 10 "Notification of Additional Characteristics"

27. The TWF considered document TWF/41/10 and agreed that proposals for additional characteristics and states of expression notified to the Office of the Union by means of document TGP/5 Section 10, should be presented to the relevant Technical Working Party(ies) (TWP(s)) at the earliest opportunity. The characteristics would then, as appropriate, be posted on the password-restricted area of the UPOV website (http://www.upov.int/restrict/en/index_drafters_kit.htm) on the basis of comments made by the relevant TWP(s).

TGP/7: Development of Test Guidelines

(i) *Coverage of ornamental varieties in Test Guidelines*

28. The TWF considered document TWF/41/11 and proposed that the proposed Additional Standard Wording (ASW) in document TWF/41/11, paragraph 1 might be extended to cover other situations by amending it to read as follows:

“In the case of [ornamental] [fruit] [industrial] [vegetable] [agricultural] [etc...] varieties, in particular, it may be necessary to use additional characteristics or additional states of expression to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability.”

(ii) *Quantity of plant material required*

29. The TWF considered document TWF/41/12.

30. The TWF agreed with the TWA proposal that the guidance in document TGP/7, GN 7 should be extended to encourage Leading Experts to consider the quantity of plant material required for similar crops in order to seek consistency as far as that was appropriate. In that regard, the TWF agreed that a summary of the following information should be prepared by the Office of the Union for all adopted Test Guidelines and made available to Leading Experts on the TG Drafters' webpage in order that information on Test Guidelines for similar crops could be presented by the Leading Expert:

- (a) Chapter 2.3 Minimum quantity of plant material to be supplied by the applicant
- (b) Chapter 3.1 Number of growing cycles
- (c) Chapter 3.4.1 Each test should be designed to result in a total of at least X plants
- (d) Chapter 4.1.4 Number of plants / parts of plants to be examined for distinctness
- (e) Chapter 4.2 Number of plants to be examined for uniformity
- (f) Number of plants for special tests (e.g. disease resistance)

(iii) *Applications for varieties with low germination*

31. The TWF noted the report of developments in document TWF/41/13 and that the Technical Working Party for Vegetables, at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, had agreed that the matter did not need to be pursued further at that time.

(iv) *Number of plants to be considered for the assessment of distinctness*

32. The TWF considered document TWF/41/14.

33. The TWF noted that the number of plants to be examined for distinctness would be different for different characteristics. For example, it recalled that characteristics such as time of flowering would need to be observed on all plants in the test (disregarding off-types), or at

least on more plants than would need to be observed for certain characteristics observed on parts of plants. In that regard, it noted that, for each characteristic, the number of plants to be observed for distinctness was linked to the number of plants to be observed for uniformity and, indirectly, stability. Therefore, it concluded that it would be more appropriate to revert to the structure in document TGP/7/1 which, in Chapter 3.5 “Number of Plants / Parts of Plants to be Examined”, indicates the number of plants to be observed and not just the number of plants to be observed for distinctness. In particular, it agreed that it would be inappropriate to introduce Chapter 4.1.4 “Number of Plants / Parts of Plants to be Examined” [observations for the purposes of distinctness] in Test Guidelines and recommended that the Technical Committee replace that chapter in all Test Guidelines put forward for adoption and amend document TGP/7/2 at the earliest opportunity.

34. However, the TWF agreed that the Additional Standard Wording (ASW 7) provided for Chapter 3.5 “Number of Plants / Parts of Plants to be Examined” in document TGP/7/1, needed to be amended in order to allow for off-type plants, within the number allowed, to be disregarded from the test.

35. The TWF agreed that it would be useful to develop guidance in document TGP/7, to be incorporated in all Test Guidelines, for the minimum number of plants required for a DUS test to be conducted. It agreed that such guidance might be in the form of a minimum number of plants in each of the Test Guidelines, or if that was not achievable, general guidance might be developed to explain that a DUS trial containing a number of plants below the number specified in Chapter 3.4 “Test Design” of the Test Guidelines might not necessarily invalidate the trial.

36. The TWF agreed with the TWO that the number of plants specified to be examined for distinctness in the Test Guidelines referred to the number of plants of candidate varieties and did not refer to reference varieties. It agreed that the number of plants of reference varieties was a separate matter.

(v) *Selection of asterisked characteristics*

37. The TWF considered document TWF/41/15.

38. The TWF agreed that the final sentence of GN 13.1 “Asterisked characteristics”, Section 1.2, should be amended to read “The number of asterisked characteristics should, therefore, be determined by the characteristics which are required to achieve useful internationally harmonized variety descriptions.”. The TWF also agreed that the guidance provided in document TGP/7, GN 13, on the selection of asterisked characteristics was appropriate and sufficient, and that it was only necessary to ensure that the guidance was followed in the development of Test Guidelines.

(vi) *Indication of grouping characteristics*

39. The TWF considered document TWF/41/16 and agreed that it would not be appropriate to include an indication of grouping characteristics in the Table of Characteristics in the (UPOV) Test Guidelines.

(vii) Guidance for method of observation

40. The TWF noted the explanations provided in document TWF/41/17. The TWF observed that, for characteristics indicating a “number” to be observed, the method of observation to be indicated would depend on the type of record: if the record was a number obtained by counting, the characteristic should be indicated as “M”, but if the record was a note corresponding to, e.g. few, medium, many etc. (such as for number of lenticels), the characteristic should be indicated as “V”.

(viii) Example varieties

41. The TWF considered document TWF/41/18.

42. The TWF noted that the example varieties in the Test Guidelines were often no longer available on the market and that the Test Guidelines would need to be revised on a regular basis in order to ensure that the example varieties were readily available. Therefore, the TWF agreed that alternatives to example varieties, such as photographs, illustrations and calibration books should be used as far as possible. The TWF agreed that the information in the GENIE database on members of the Union with practical DUS experience for specific plant genera and species provided the best mechanism for DUS experts to obtain relevant information and guidance. The TWF also discussed the potential benefits of leading experts providing the measured values for the notes of quantitative characteristics in Chapter 8 of the Test Guidelines.

43. As a potential means of maximizing the information provided by example varieties, the TWF agreed that consideration should be given to indicating the state of expression of example varieties for all characteristics in the Test Guidelines, in a similar way to the information provided for the Regional Set of Example Varieties (North East Asia) in the Annex to the Test Guidelines for Rice (document TG/16/8).

44. With regard to the need to assist applicants in providing accurate information in the Technical Questionnaire, the TWF noted the importance of ensuring that the example varieties were readily available to applicants, but also noted that it would be important that the same measures to minimize reliance on example varieties for authorities be reflected in the Technical Questionnaire. In particular, it agreed that photographs, illustrations and explanations provided in Chapter 8 of the Test Guidelines should be made available in the Technical Questionnaire and suggested that document TGP/7 and Test Guidelines should follow that approach. It also agreed that particular consideration should be given to the suitability of characteristics for inclusion in the Technical Questionnaire and to the possibility for characteristics to be presented in a different way in the Technical Questionnaire to the characteristics in the Table of Characteristics, in a similar approach to the option for color groups in the Technical Questionnaire, as an alternative to the RHS Colour Chart. The expert from the European Union reported that the CPVO had already started to provide the explanations in its Technical Questionnaires for electronic applications. He also reported that the Technical Working Party for Vegetables (TWV), at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, had agreed that the illustrations for shapes in the form of a grid (see TGP/14/1 Draft 9: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 19, Section 2.1.3 and page 28), should be provided in the Technical Questionnaire for the Test Guidelines for Tomato.

(ix) *Providing photographs with the Technical Questionnaire*

45. The TWF considered document TWF/41/19.

46. The TWF agreed that the document should be structured into sections with titles concerning the various aspects (e.g. format, background etc.) and illustrative examples should be provided. It was also agreed that it should be emphasized that it was not a requirement to provide photographs of the candidate variety alongside the nominated similar variety and agreed that the requirement that the “candidate variety must always be on the left side of the photograph taken alongside the similar variety” (see paragraph 9 (v)) should be deleted. With regard to the proposal of the Technical Working Party on Automation and Computer Programs (TWC) to consider adding the possibility of using a standard color check chart, instead of the RHS Colour Chart (see paragraph 9 (vi)), the TWF noted that the use of such a standard color check chart would not be instead of the RHS Colour Chart. The TWF also agreed that the document should refer to the applicant rather than the breeder.

47. With regard to the proposed new text for ASW 16, as set out in document TWF/41/19, the TWF agreed that it should be amended to read:

“A representative color photograph (image) of the variety, displaying its main distinguishing feature(s), must accompany the Technical Questionnaire. A photograph provided according to the specified requirements (see ... [authority reference to be added]) will help the examination authority to prepare its examination of distinctness in a more efficient way by giving a visual illustration of the candidate variety. The information provided by the photograph may be used in the selection of the most appropriate varieties of common knowledge to be grown alongside the candidate variety in the trial, as well as to group the variety optimally within the DUS trial.”

48. The TWF agreed that further consideration would need to be given to the Additional Standard Wording (ASW) in document TGP/7, and in the Test Guidelines, in order to enable the requirements of individual authorities to be provided.

(x) *Standard references in the Technical Questionnaire*

49. The TWF considered document TWF/41/8 and agreed that the standard references for the UPOV Model TQ and for Test Guidelines, as set out in Annexes III and IV of that document, should be introduced within the context of a future revision of document TGP/7 (document TGP/7/3).

50. The TWF also agreed that, as a means of providing information in a convenient form, consideration should be given to authorities having the possibility to receive information in the UPOV linear form, in addition to the forms that the authority required for an application.

TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability

51. The following comments were made on document TWF/41/20, Annexes I to XIV, including document TWF/41/24, TWF/41/25 and TWF/41/26:

TGP/8 PART I: DUS TRIAL DESIGN AND DATA ANALYSIS

*Annex I**New Section 2 - Data to be recorded (Drafter: Mr. Uwe Meyer (Germany))*

The TWF agreed that Erik Schulte (Germany) should participate in the development of the section.

*Annex IV**New Section – Information of good agronomic practices for DUS field trials (Drafter to be agreed)*

The TWF noted the standard wording in Chapter 3.3 of Test Guidelines: “The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.”. The TWF agreed with the TWV that it would be very difficult for UPOV to develop guidance on good agronomic practices and suggested that further consideration should be given to the possible content of such a section before drafting of a section began. For example, it noted that guidance would need to cover a wide range of growing conditions (field trials, greenhouse trials etc.), different DUS testing arrangements and different types of crop / species (agricultural crops, fruit, ornamentals, vegetables, mushrooms etc.). However, it considered that it might be useful to consider providing literature for aspects such as trial design.

TGP/8 PART II: TECHNIQUES USED IN DUS EXAMINATION

*Annex V**New Section after COYU – Statistical Methods for very small sample sizes (Drafter Mr. Gerie van der Heijden (Netherlands))*

The TWF agreed that one of the aspects to be considered would be guidance on the sample size where several parts of plants were taken from a number of individual plants: to clarify whether the sample size would relate to the number of plants or the number of plant parts.

*Annex X**New Section 12 - Examining characteristics using image analysis (Drafter: Mr. Gerie van der Heijden (Netherlands))*

The TWF noted the information from the expert from Australia that the examples to be provided by Australia for the section would include examples of image analysis on fruit.

*Annex XII**New Section - Guidance of data analysis for blind randomized trials (Drafter to be agreed)*

The TWF agreed that Israel should provide an example.

*TGP/12 Guidance on Certain Physiological Characteristics**Disease nomenclature and disease resistance characteristics*

52. The TWF considered document TWF/41/21 and noted that breeding developments, for example with regard to Plum Pox Virus in Apricot and Apple Scab in Apple, could mean that disease resistance characteristics would become of increasing relevance for Test Guidelines for some fruit crops in the future. It was also noted that the Test Guidelines for Japanese Pear (document TG/149/2) contained a characteristic for resistance to black spot (*Alternaria kikuchiana* Tanaka).

53. The TWF noted the importance of disease resistance as a breeding aim and its importance for variety registration purposes, but clarified that such factors did not directly affect the suitability of disease resistance as a DUS characteristic. With regard to examining disease resistance as a DUS characteristic, the TWF noted that it was important to recall that authorities could arrange for tests to be conducted by specialized laboratories and could also use cooperation with other UPOV members in order to address situations where the DUS testing center did not have suitable facilities for conducting the test, or was prevented from conducting such tests because of phytosanitary restrictions. It agreed that it would be useful to prepare a document setting out such issues and invited Mr. Sergio Semon (European Union) to prepare such a document. In order to advance consideration of the issue, the TWF agreed that a first draft of that document should be circulated to the TWF by correspondence by June 30, 2011, with 4 weeks for comments and that a document should be provided to the Office of the Union 6 weeks before the forty-second session of the TWF.

TGP/14: Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents

54. The TWF considered documents TWF/41/22 and TWF/41/23.

55. With regard to the proposal in document TWF/41/22 that, if varieties have different shapes and different sizes within the same shape, only one absolute dimension (length or width) and the ratio should be used for DUS, the TWF shared the concerns of the TWV. In the first instance, it was noted that both length and width would need to be recorded in order to derive the ratio length/width. It also considered that it was often useful to have a separate description for length, width and ratio length/width. With regard to concerns about duplication of characteristics, it was noted that there was a suitable warning in relation to GAIA in document TGP/8/1 Draft 15, Part II, 1. The GAIA Methodology, Section 1.3.1 Weighting of characteristics. It did not anticipate problems for DUS examiners making decisions on DUS where the characteristics length, width and ratio length/width were considered separately and noted that there were correlations between other types of characteristics

56. With regard to characteristics for ratio length/width, the TWF agreed that TGP/14 should be amended to indicate that the order of states of expression for ratio length/width should be from very compressed (low ratio) (e.g. note 1) to very elongated (high ratio) (e.g. note 9).

57. The TWF agreed that additional definitions for botanical terms, such as for peduncle and petiolule, should be added to document TGP/14 where the provision of such definitions would help to avoid confusion. However, it confirmed that this should not result in a change to the explanation in document TGP/14/1 that “In general, the meaning of botanical terms which are used in the Test Guidelines to indicate the relevant part of the plant to be examined, but which are not themselves used as states of expression (e.g. bract, petal, berry, etc.), do not require a UPOV specific definition and are not included in this document.”.

58. The TWF agreed the following with regard to document TWF/41/23:

<u>PART II: COLOR</u>	
2.1	to be deleted
2.2	to add (e) Color Chart and to check whether it should refer to RHS Colour Chart
2.3	to have the header “States of expression for color characteristics” and to provide an explanation for each of the aspects in 2.2 (a) to (e), in that order, on the basis of the information currently provided in 2.3
2.4	to be incorporated within new Section 2.3 “States of expression for color characteristics”
2.4.1.1.3	to delete text in brackets after “RHS 11D – light yellow orange”
<u>PART III: COLOR DISTRIBUTION / PATTERN</u>	
General	<p>to structure the section on the basis of the approaches to describe colors and color patterns, as set out in the document, including in particular:</p> <ul style="list-style-type: none"> Main color / secondary color etc. (surface area) Main color / over patterns Ground color / over color, flush or blush RHS Colour Chart order (“Lisbon” approach) Color of defined parts of an organ Variegation Pigments (anthocyanin, carotenoid) Conspicuousness Color change over time Number of colors (if retained) <p>and to provide illustrative examples for each approach.</p> <p>The TWF also agreed that Mr. Chris Barnaby (New Zealand) should be invited to draft guidance on criteria to be considered for selecting the most appropriate approach.</p> <p>Mr. Ben-Zion Zaidman (Israel) requested to be added to the subgroup of interested experts for the Color Section of document TGP/14.</p>
3.1	to review whether to discourage the use of a characteristic for number of colors

4.2.3	to check whether these terms are useful for any of the approaches to be included in the document
4.5.2	to base this section on the Japanese scheme for determining color pattern terms (document TWO/43/23 Rev., Annex II), but to include only those patterns that are named and currently included in Section 4.5.2
4.6	to improve the illustration for “Tesselate”
4.8	to be deleted
4.11.4	to check whether to delete

Variety denominations

59. The TWF noted the report of developments in document TWF/41/4.

DUS examination of seed-propagated varieties of Papaya

60. The TWF considered document TWF/41/27, as presented by Mr. Alejandro Barrientos-Priego (Mexico).

61. The TWF agreed with the approach proposed by the Leading Expert for the Test Guidelines for Papaya, as set out in document TWF/41/27, paragraph 11 and also agreed with the TWA that, in Chapter 3.4, it would be important to specify the number of plants that would need to be sown in order to achieve 25 hermaphrodite plants. It also agreed with the TWA that it might be appropriate to consider the addition of a characteristic for the proportion of male plants, female plants and hermaphrodite plants in the variety, if that characteristic would fulfill the requirements for a characteristic set out in the General Introduction.. It also noted that there would be no obstacle to develop additional characteristics for male plants and female plants if that would be useful.

Discussion on draft Test Guidelines

Acerola (Malpighia emarginata DC)

62. The subgroup discussed document TG/ACERO(proj.2), as presented by Mr. Katsumi Yamaguchi (Japan), and agreed the following:

Cover page	to add “ <i>Malpighia puniceifolia</i> auct., non L.” as alternative botanical name and Spanish names to read “Acerola, Someruco”
2.3	to read “... - 5 budsticks with sufficient buds to propagate 5 trees (to be sent at budding time) or - 5 dormant shoots grafted on a rootstock selected by the testing authority, or - 5 one-year-old trees grafted on a rootstock selected by the testing authority.

4.2.2	to read “For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 5 plants, no off-types are allowed.”
Char. 1	to add (*) and state 3 to read “drooping”
Char. 3	to add (*)
Char. 4	to be indicated as MS/VG and to add (*)
Char. 5	to be indicated as MS/VG and to add (*)
Char. 6	to replace notes 3, 5, 7 with 1, 2, 3
Char. 7	to be deleted
Char. 8	to be indicated as MS/VG and to add (*)
Char. 9	to be indicated as MS/VG
Char. 10	to add (*) and example varieties to be provided for states 1 and 3, if available
Char. 11	to replace notes 3, 5, 7 with 1, 3, 5 and to add (*)
Char. 12	to read “Leaf blade: shape of apex”, to be indicated as PQ and to have the states: acute (1); obtuse (2); rounded (3)
Char. 13	to replace notes 3, 5, 7 with 1, 3, 5 and to add (*)
Char. 14	to be deleted
Char. 15	to add (*)
Char. 16	to read “Flower: curvature of style” and state 1 to read “straight” and state 3 to read “strongly curved”
Char. 17	to delete “exclude the largest petal” and to be explained in Ad. 17 and to replace notes 3, 5, 7 with 1, 3, 5
Char. 18	to be indicated as QN and to check whether characteristic should read “Petal: intensity of pink color”, with the states: light pink (1); medium pink (2); dark pink (3)
Char. 19	to be indicated as MS/VG, to read “Fruit: length”, state 7 to read “long”, example varieties to be provided and to add (*)
Char. 20	to be indicated as MS/VG and to add (*)
Char. 21	to be indicated as MS/VG, to read “Fruit: ratio length /diameter” and to have the states: elongated (1); medium (2); compressed (3)
Char. 22	to be indicated as MG and to add (+) with explanation that 10 fruits are to be observed
Char. 23	to add (*) and to have the states: oblong (1); circular (2); oblate (3); ovate (4)
Char. 24	to add (*) and example varieties to be provided to Leading Expert by Brazil
Char. 25	to add (*)
Char. 26	to add (*)
Char. 27	to add (*)
Char. 28	to add (*)
Char. 29	example varieties to be provided to Leading Expert by Brazil
Char. 30	to be indicated as MS/VG and to add (*)
Char. 31	to be deleted
Char. 32	to be deleted
Char. 33	to add (*)
Char. 34	to be indicated as MG and to add (+) with explanation
Char. 35	to add (*) and to replace notes 3, 5, 7 with 1, 3, 5
Char. 36	to be indicated as VG, to add (*) and to replace notes 3, 5, 7 with 1, 3, 5
Char. 37	to read “Stone: intensity of brown color”, with the states: light (Maunawili) (1); medium (Tropical Ruby) (2); dark (3)
Char. 38	to be deleted

8.1	(a) and (d) to be combined to read: “(a) observations should be made at physiological ripeness, when the color change of the fruit is complete”
Ad. 3	to be deleted
Ad. 18	to be deleted
Ad. 24	to add arrows to indicate grooves
Ad. 25, 26 etc.	to check alignment of lines
9.	to be completed and formatted according to TGP/7
TQ 6	example to refer to Fruit color / light red / medium red
TQ 9.3	to be deleted

Actinidia Lindl. (Kiwifruit)

63. The subgroup discussed document TG/98/7(proj.2), as presented by Mr. Chris Barnaby (New Zealand), and agreed the following:

Cover page	to add alternative names: Kiwi (F), Kiwi (G), Kiwi (S)
1.	to read: “These Test Guidelines apply to all varieties of <i>Actinidia</i> Lindl.”
2.3	to read: “The minimum quantity of plant material, to be supplied by the applicant, should be determined by the Authority, being either:”
6.4 (A) and (B)	to replace “Female, hermaphrodite and male” with “All”
4.1.4	to read: “Unless otherwise indicated, all observations on single plants for DUS should be made on 5 plants, or parts taken from each of 5 plants.”
Table of Char.	to revise spelling of example variety “Kosui” to “Kousui” throughout
Char. 2	to delete “(hermaphrodite varieties only)” and to check whether to add (+) with explanation of how to observe (avoiding cross pollination) and to provide example varieties
Char. 5	to read: “density of hairs” and to delete (+)
Char. 7	to add (*)
Char. 10	state 1 to read: “absent or sparse” and to provide example variety for state (3)
Char. 11	to consider reducing range of notes 1, 2, 3, 4
Char. 12	to be indicated as VG
Char. 13	to read “Stem: prominence of bud support”, with the states: very weak (1) weak (2); medium (3); strong (4); very strong (5) and to add explanation “This is determined by the bud support height/stem diameter contrast”
Char. 14	to provide further explanation and diagram/photograph in Ad. 14, 15 and Ad. 16
Char. 15	to reduce number of states to 1, 2, 3 and to provide explanation under Ad. 15 concerning the hole in the bud cover and to improve diagrams for Ad. 14, 15
Char. 16	to provide explanation under Ad. 16 concerning the leaf scar
Char. 17	to add (+) with explanation
Char. 18	to combine Ad. 18 and Ad. 19 and provide grid
Char. 19	to add (+) with explanation and to be indicated as VG/MS to add (*) (combine Ad. 18 and 19 in a grid) and to correctly label diagrams for “emarginated” and “retuse”

Char. 20	state 6 to read “emarginate with cuspidate” and to review example varieties and to provide a grid in Ad. 20
Char. 21	to delete
Char. 22	to read: “Leaf blade: basal lobes” and to add state “none” (1) and to add (+) with diagram and to add (*)
Char. 23	to add (+) and JP to provide explanation on how to observe
Chars. 24 to 27	to underline “upper” and “lower”
Char. 28	to add (*)
Char. 29	to reverse order of states 2 and 3 and photo of state (1) to be provided by KR
Char. 30	to delete
Char. 31	to read: “Leaf: Length of petiole relative to blade” and to delete (+)
Char. 32	to underline “upper”
New Char. before Char. 33	to consider adding New Char. before Char. 33 to read: “Inflorescence: type” with the states: solitary (1); dichasium (2); Pleiochasium (3) and to add (+) CN will provide diagram
Char. 33	to add (+) with explanation on when to observe and to indicate as MG
Char. 34	to delete “the” and to add (+) JP to provide explanation and to have notes 1, 2, 3 and to be indicated as VG
Char. 35	to read: “Flower: number of sepals” and to be indicated as VG
Char. 36	to read: “Flower: main color of sepals”
Char. 37	to read: “Flower: density of sepal hairs”
Char. 38	to be indicated as MS
Char. 41	to delete
Char. 42	to add explanation that main color can be shaded
Char. 43	to be indicated as QN and to add (+)
Char. 44	to add “(if present)” and to delete state: none (1)
Char. 47	to read “Flower: number of styles” and move to after Char. 40
Char. 48	to read “Flower: attitude of styles” and move to after Char. 40
Char. 50	to change state (7) to “long” and to be indicated as MS
Char. 51	to be indicated as MS
Char. 52	to delete states (1) and (9)
Char. 53	to add example variety „Jecy Gold (A)” in state (1) and to improve diagram
Char. 54	to be indicated as VG
Char. 56	to consider combining with Char. 55. If retained, to clarify what determines the degree of pointed protrusion
Char. 59	to be indicated as VG/MG/MS and to add (*)
Char. 60	to read “Fruit: length of stalk relative to length of fruit”, with the states very short to very long, to be indicated as VG/MG/MS and to add (*)
Char. 61	to add (*) and to delete photos and add explanation
Char. 66	to delete “(when rubbed)” and to add (+) with explanation
Char. 68	to replace notes 3, 5, 7 with 1, 3, 5
Char. 71	to delete underlined part and to add “absent or” to state 1
Char. 72	to delete underlined part
Char. 76	to be indicated as MG
Char. 77	to be indicated as MG
Ad. 61	to delete photographs and explain that the conspicuousness of the lenticels is determined by their size and number
Ad. 74	to provide Ad. 74 separately

Ad. 76	to delete “(SCC)”
Ad. 80	to read “It is recommended that harvest occur when the total soluble solids content is at the level determined by national or regional harvest requirements. The total soluble solids content can be measured by Brix test.

Almond (Prunus amygdalus Batsch) (Revision)

64. The subgroup discussed document TG/56/4(proj.2), as presented by Mrs. Carensa Petzer (South Africa), and agreed the following:

Cover page	to add alternative names: Amandier (F), Mandel (G), Almendro (S)
1.	to delete “of vegetatively propagated fruit”
3.3.2	to be deleted
4.1.4	to be deleted
4.2.1	to be added from TG/template
5.3	Grouping characteristics to be Chars. 8, 27, 37, 44, 45
Table of Chars.	- to add (*) to all Chars. EXCEPT Chars. 4, 7, 18, 22, 23, 26 - to correct spelling of example variety “Nec Plus Ultra” - to change example variety name “Volcani 59/4” to “Uhm L Fahem”
Char. 2	to add (+) and provide illustration
Char. 3	to read: “Tree: texture of bark” and to be indicated as QN
Char. 5	to delete “intensity of” and text in brackets to be moved to Ad. 5
Char. 6	to read: “Shoot: feathering” and to have notes 1 to 5
Char. 8	to delete note (b)
Chars. 9, 10	to be indicated as MS/MG
Char. 11	to read: “Leaf blade: ratio length/width” with states: very elongated (3); moderately elongated (5); slightly elongated (7) and reverse order of example varieties
Char. 13	to add (+) and provide illustration (TGP/14, page 57) and to check whether QL
Char. 14	to be indicated as QN and MS/VG
Char. 15	to add (+)
Char. 16	to add (+) with explanation “Color of tip of petals to be observed just before opening.” and to correct spelling of example variety “Ardecchoise” to “Ardechoise”
Char. 18	to add note (a) and to reduce notes to 1 to “very strong” 5
Char.19	to read: “Flower: diameter” and to have notes to 3, 5, 7 and to be indicated as MS/VG
Char. 22	to have notes 1 to 4 and to add state “very strong” (5)
Char. 23	to have notes 1 to 3
Char. 24	to delete “very” from state (1) and to be indicated as QN and VG and to provide example varieties
Char. 27	to be indicated as VG
Char. 29	to add (+) and provide illustration (TGP/14, page 44)
Char. 30	to delete “(density)” and reduce notes to 1 to 3 and to be indicated as VG
Char. 31	to provide example varieties and to be indicated MS/VG
Char. 32	to be indicated as MS/VG and to provide example varieties

Char. 33	to have states: compressed (2); medium (3); elongated (4) and to add (*) and to be indicated as MG
Char. 35	to add (+) with illustration (TGP/14 page 44)
Char. 37	to read “Stone: resistance to cracking” and to format (*) correctly
Char. 38	to have states: weak (3) ; medium (5); strong (7) with example varieties: Peerless (3); Nec Plus Ultra (5); Nonpareil (7)
Char. 40	to read: Kernel: intensity of brown color with states: light (1); medium (2); dark (3) and to add (+) with explanation: “To observe on freshly opened stones.” to be indicated as QN
Char. 41	to delete
Char. 42	to have states: weak (1); medium (3); strong with notes 1, 3, 5 and have example varieties: Texas Mission (1); Uhm L Fahem (3); Carmel (5)
Char. 43	to reduce notes to 1 to 3 and to be indicated as QN
Char. 44	to add (*) and group and to be indicated as MG
Char. 45	to format * correctly
8.1	to check new wording deleting “All” and “the leaf and the shoot”: “(a) Observations on the bud should be made at the central third of the shoot. The observations on the leaves should be made on mature leaves from current season’s shoots.”, etc.
8.1 (c)	to change “80 days” to “approximately 3 months”
8.2	to re-order all Ads. and update titles accordingly
Ad. 5	to read: “The anthocyanin coloration should be observed on the sunny side.”
Ad. 6	to read: “Feathering is the presence of secondary shoots on current year’s shoots.”
Ad. 15	to add: “Observations on flower bud shape should be made on buds removed from the tree.”
Ad. 20	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, etc. (see TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 21, Section 2.).
Ad. 28, 34	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, position of broadest part etc. (see TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 21, Section 2.).
Ad. 37	to read: “The ease with which the stone can be cracked by hand.”
9.	to add “No specific literature.”
TQ 1.1	to add: “ <i>Prunus amygdalus</i> (L) and <i>Prunus dulcis</i> (Mill.) D.A. Webb.”
TQ 4.2	to see standard wording TGP/7
TQ 4.2.2	to delete
TQ 5	to update with new Grouping Chars.

Cacao (*Theobroma cacao* L.)

65. The subgroup discussed document TG/CACAO(proj.3), as presented by Mr. Alejandro Barrientos-Priego (Mexico), and agreed the following:

Cover page	to replace German common name “Schokolade” with “Kakao”
2.3	to read: “The minimum quantity of plant material, to be supplied by the applicant, should be: seed-propagated varieties: 20 fresh seeds vegetatively propagated varieties: 5 plants ...”
4.2.5	to be deleted
Table of Chars.	additional example varieties to be provided
Char. 1	to be indicated as VG and to replace notes 3, 5, 7 with 1, 2, 3
Char. 2	to read “Leaf blade: shape of base”, to be indicated as VG and to add (*)
Char. 3	to be indicated as VG
Char. 4	to be indicated as VG and to add (*)
Char. 5	to be indicated as VG and (+) to be deleted
Char. 6	to be deleted
Char. 7	to be indicated as QN, VG and to add (*)
Char. 8	to be indicated as VG/MS
Char. 9	to be indicated as VG/MS and to have the states: narrow (3) ...broad (7)
Char. 10	to be indicated as VG and to replace notes 1, 3, 5, 7 with 1-4
Char. 11	to read “Flower: color of ligula”, with the states: cream (1); cream yellow (2); yellow (3), to be indicated as PQ, VG and to add (*)
Char. 12	to read “Staminode: anthocyanin coloration”, with the states: absent or very weak (1); weak (2); medium (3); strong (4), to be indicated as QN, VG and to add (*)
Char. 13	to be indicated as VG, to add state 1 “ovate”, with example variety to be provided
Char. 14	to be indicated as VG
Char. 15	to be indicated as VG
Char. 16	to be indicated as VG/MS and add to add (*)
Char. 17	to be indicated as VG/MS and to add (*)
Char. 18	to be indicated as VG/MS, to reverse the order of states and to add (*)
Char. 19	to be indicated as VG and to have the states: smooth or slightly rough (1); moderately rough (3) very rough (5)
Char. 20	to read “Fruit: depth between ridges”, to be indicated as QN, VG, to add (+) and provide illustration and to have the states: absent or very shallow (1); shallow (2); medium (3); deep (4)
Char. 21	to be indicated as VG, state 1 to read “green yellow”, example varieties to be provided and (+) to be deleted
Char. 22	to be indicated as VG/MS
Char. 23	to be indicated as VG and to check whether to have the states white (1); light cream (2); dark cream (3) and to be indicated as PQ
Char. 24	to be indicated as MG and to add (*)
Char. 25	to be indicated as VG/MS and to add (*)
Char. 26	to be indicated as VG

Char. 27	to be indicated as VG/MS and to add (*)
Char. 28	to be indicated as VG/MS, to add (*) and to have notes 3, 5, 7
Char. 29	to be indicated as VG/MS, to add (*), to reverse the order of states and to check whether to amend the states (if no seeds with ratio length/width less than 1 – compressed) and to have notes 3, 5, 7
Char. 30	to be indicated as VG/MS
Char. 31	to be deleted
Char. 32	to be indicated as VG, to add (*) and to delete (+)
Char. 33	to be indicated as MG
Char. 34	to be deleted
8.1 (a)	to read “Observations should be made on fully developed leaves, when the first fruit is fully developed.”
Ad. 5	to be deleted
Ad. 13	to be updated with state “ovate” and to provide illustration in form of grid
Ad. 22	to read Ad. 20
Ad. 21	to be deleted
Ad. 26	to be improved and to provide illustration in form of grid
Ad. 32	to be deleted
9.	to add further literature

Dragon-fruit (Hylocereus undatus (Haw.) Britton et Rose)

66. The subgroup discussed document TG/DRAGON(proj.4), as presented by Mr. Alejandro Barrientos-Priego (Mexico), and agreed the following:

Cover page	to delete common English name “Pitaya”
1.	to read: “These Test Guidelines apply to all varieties of <i>Hylocereus</i> .”
2.2	to read “, stem segments measuring 40 cm in length, sufficient to produce 6 plants.” and to delete reference to those requirements in Chapter 2.3.
4.1.4	to reduce number of plants to 5
4.2.2	to reduce number of plants to 5
5.3	to delete all comments
Char. 1	to be indicated as VG
Char. 2	to add (+) with illustration on segment on plant and to be indicated as VG/MG
Char. 3	to be indicated as VG/MG
Char. 4	to be indicated as VG
Char. 5	to delete “(excluding areole)” and to change state (3) to “rough” and to add (+) with explanation “To be assessed excluding areole” and to be indicated as VG
Chars. 6, 7	to be indicated as VG/MG
Char. 8	Ad. 8: to show dotted line at level of areoles (1= areoles/spines protruding; 2 = areoles at same level as rib; 3 = areoles below level of ribs) and to be indicated as VG
Char. 9	to read: “Stem: grey color of areoles” and to be indicated as VG
New Char. before Char. 10	to read: “Aerial: number of spines” with the states: few (1); medium (2); many (3) and to be indicated as VG and QN
Char. 10	to be indicated as VG/MG

Char. 11	to have states: grey (1); medium brown (2); dark brown (3) and to be indicated as PQ and VG
Char. 12	to have states: ovate (1); elliptic (2); circular (3); oblate (4) and to be indicated as PQ and VG
Char. 13	to be indicated as VG
Char. 14	to have states: cream (1); yellowish green (2); green (3); light red (4); medium red (5) and to be indicated as VG
Char. 15	to add explanation to Ad. 15, 16, 17 and to be indicated as VG/MG
Char. 16	to read: "Flower bud: width of pericarpel" and to add explanation to Ad. 15, 16, 17 and to be indicated as VG/MG
Char. 17	to read: "Flower bud: length of perianth" and to add explanation to Ad. 15, 16, 17 and to be indicated as VG/MG
Char. 18	to add (+) with explanation indicating where to do the observation (pericarpel) and to change state (2) to "medium" and to be indicated as VG
Char. 19	to check whether to add state: red and IL to provide example variety and to have states: white (1); cream (2); yellow (3); yellowish green (4) and to be indicated as VG
Char. 20	to add (+) with explanation and to be indicated as VG
Char. 21	to read "Sepal: pattern of secondary color" and add state (1) "none" and to add (+) with explanation and to be indicated as PQ and VG
Char. 22	to be indicated as VG/MG
Char. 23	to be indicated as VG
Char. 24	to delete
Char. 25	to be indicated as VG
New Char. before Char. 26	to read: "Flower: position of anthers in relation to stigma" with states: below (1); same level (2); above (3) and to be indicated as QN and VG
Chars. 26, 27	to be indicated as VG/MG
Char. 28	to be indicated as MS
Char. 29	to be indicated as VG
Char. 30	to check whether to read "...length of apical bracts" and to be indicated as VG/MG
Char. 31	to be indicated as VG
New Char. before Char. 32	to read: "Fruit: position of bracts towards the peel" with the states: adpressed (1); slightly held out (2); strongly held out (3) and to add (+) and provide illustration and to be indicate as VG and QN
New Char. before Char. 32	to read: "Fruit: width of the base of the bracts" with the states: narrow (1); medium (2); broad (3) and to add (+) with illustration and to be indicated VG/MG and QN
Char. 32	to add (+) with illustration and to be indicated as VG/MG
Char. 33	to to add (+) with explanation on excluding bracts and to be indicated as VG and to add more example varieties
Char. 34	to add state: "light grey" (2) and renumber notes accordingly and to consider including state "opaque" and to be indicated as VG
Char. 35	to be indicated as MG
New Char.	not to include char. on acidity
Char. 36	to delete

New Char. after Char. 36	to read: “Fruit : apical cavity” with the states: absent or shallow (1); medium (2); deep (3) and to be indicated as VG and QN
8.1	to add explanation for 3.3 “produce satisfactory crop in the main fruiting period”
Ad. 12	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, etc. (see TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 21, Section 2.).
Ad. 15, 16, 17	to add explanation “To be observed just before the opening of the bud.”
Ad. 21	to improve illustration and to include state (1) none
Ad. 22, 23	to improve illustration and to show how to observe length of style
Ad. 24	to delete
Ad. 30, 31	to update texts as per new wording in Chars.
Ad. 31	to provide illustration
Ad. 32	to add illustration and to delete IL comments
Ad. 36	to delete
9.	wording to be revised according to TGP/7 and to include “*Khaimov, A., and Mizrahi, Y. (2006). Effects of day-length, radiation, flower thinning and growth regulators on flowering of the vine cacti <i>Hylocereus undatus</i> and <i>Selenicereus megalanthus</i> . Journal of Horticultural Science & Biotechnology 81(3): 465-470. Flowering behaviour of various genotypes might be changed according to external conditions.”
TQ 1.1	to read: <i>Hylocereus</i>
TQ 1.2	to read: Dragon fruit
TQ 5	to update accordingly and to add Char. 8

Gooseberry (Ribes uva-crispa L.) (Revision)

67. The subgroup discussed document TG/51/7(proj.2), as presented by Mr. Erik Schulte (Germany), and agreed the following:

Cover page	to delete reference to <i>Ribes uva-crispa</i> L. var. <i>reclinatum</i> (L.) Berl. and <i>Ribes uva-crispa</i> L. var. <i>sativum</i> DC. and to consider deleting UPOV codes from GENIE: subspecies not recognized in GRIN
Cover page	Alternative names: to add Groseillier à maquereau (F), Agrazón; Grosellero silvestre; Uva crespá (S)
4.1.4	to read “Unless otherwise indicated, all observations should be made on 5 plants or parts taken from each of 5 plants” and to be moved to Chapter 3.
Table of Chars.	- to delete comments - to replace “prickles” with “thorns” and “bristles” with “prickles”
Chars. 1, 2, 8, 9, 10, 12, 13, 15, 17, 19, 20, 21, 22, 24, 29, 32, 36, 37	to add (*)
Char. 3	to be deleted
Char. 4	to be deleted
Char. 5	to replace note (b) with note (a) and to have the states: erect (1); semi erect (3); horizontal (5)
Char. 6	to be deleted

Char. 11	to read “Shoot: number of thorns”, to move before Char. 8 and explanation to read “to be observed as the number of thorn attachments on the upper third of the shoot”
Char. 13	to add (+) and provide illustration
Char. 16	to add (+) with explanation that the observations should be made on the leaf and shoot at the stage of rapid growth and to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 17	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 18	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 22	state 2 to read “moderately acute” and state 4 to read “moderately obtuse”
Char. 23	to replace notes 3, 5, 7 with 1, 3, 5
Char. 24	to be indicated as MG
Char. 25	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 26	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 27	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 28	to delete example varieties Captivator, Hinnonmäen Punainen, Hinnonmäen Keltainen
Char. 30	state 3 to read “obovate”
Char. 31	to have the states: whitish green (Weiße Kristall) (1); green (Grüne Kugel) (2); yellow green (Gelbe Triumph, Invicta) (3); yellow (Golda, Golden Lion, Rixanta) (4); medium red (Korsun, Rokula, Rolonda) (5); dark red (Achilles, Cernomore, May Duke, Remarka, Rubikon) (6) and to add (+) with explanation that the color should be observed after the bloom has been removed
Char. 32	to replace notes 1, 3, 5, 7, 9 with 1-5
Char. 33	to replace notes 1, 3, 5, 7 with 1-4 and to add state 5
Char. 34	to replace notes 3, 5, 7 with 1, 3, 5
Char. 35	to read “Fruit: strength of skin”, to replace notes 3, 5, 7 with 1, 3, 5 and to add (+) with explanation
Char. 36	to replace notes 3, 5, 7 with 1, 3, 5
Char. 37	to replace notes 3, 5, 7 with 1, 3, 5
Char. 40	to add example variety “Remarka” for state 1
8.1	to read: <ul style="list-style-type: none"> (a) observations should be made during the dormant season before pruning. (b) observations should be made on one-year-old shoots during the dormant season before pruning. (c) observations should be made after the beginning of growth on shoots of approximately 10 cm in length. (d) observations should be made after the beginning of growth when the leaflets are about 2 cm wide and the shoots 3 to 5 cm long. (e) observations should be made at the stage of fruit maturity, when the fruits have achieved full color, on the upper third of typical shoots (f) observations should be made at the time of full flowering. (g) observations should be made at the time when the fruit is physiologically ripe.
Ad. 30	to delete photographs and to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, position of broadest part etc. and to correct states according to Table of Chars.
Ad. 31	photograph to be deleted
Ad. 32	to add that the bloom can be removed by rubbing
Ad. 34	to be provided

Ad. 36	to indicate part to be observed
Ad. 37	to indicate part to be observed
Ad. 38	to read “The time of bud burst is when 10% of buds have first green leaves visible.”

Japanese plum (Revision)

68. The subgroup discussed document TG/84/4(proj.3), as presented by Mr. Sergio Semon (European Union), and agreed the following:

2.3	to delete “virus-tested”
Chars. 1-8, 12-17, 19, 23, 24, 26-28, 29, 32-35, 38-46, 52-59	VG
Chars. 9-11, 18, 20	MS/MG
Chars. 21, 22, 25, 30, 31	MS
Char. 36	MS/MG/VG
Chars. 37, 47,	VG/MS
Char. 48	VG/MG
Chars. 50, 51, 60, 61	MG
Table of Chars.	to review example varieties to check that the varieties for each characteristic represent a single scale.
Char. 1	to add example variety “Gaviota” for state 1 and example variety to be provided for state 3
Char. 3	to add (*)
Char. 4	to have the states: greyish brown (1); yellow brown (2); brown (3); reddish brown (4), with example varieties to be provided to the Leading Expert by Japan
Char. 6	(+) to be deleted
Char. 9	to add (*) and to delete states 1 and 9
Char. 10	to add (*), to delete states 1 and 9 and example variety for state 7 to read “Combination”
Char. 14	to read “Leaf blade: color of upper side”, with the states: light green (1); medium green (2); dark green (3); reddish purple (4) with Japan to provide the Leading Expert with an example variety for state 4 (no change to other example varieties) and to add (*)
Char. 16	to read “Leaf blade: density of pubescence of lower side”
Char. 17	to add (*)
Char. 20	to add (+) and provide illustration and to delete example variety “Laroda”
Char. 21	to read “Flower: predominant number of petals”, with the states: five (1); six (2); seven (3), to be indicated as PQ, Japan to provide example varieties to the Leading Expert and (+) to be deleted
Char. 22	to add (*) and to delete example variety “Apple”
Char. 24	to add (*)
Char. 25	to add (*)
Char. 28	to add (*)
New 1 (after 28)	to read “Fruit: length of stalk”, with the states: short (3); medium (5); long (7), to be indicated as QN, MS and Japan to provide example varieties to Leading Expert
Char. 30	to add (*)
Char. 31	to add (*)

Char. 32	to delete “general”
Char. 34	to read “Fruit: shape of base” and to be indicated as PQ
Char. 35	to read “Fruit: shape of apex”
Char. 36	to add (*) and to have notes 1, 2, 3
Char. 37	to add (*) and to have notes 1, 2, 3
Char. 38	to add (*)
Char. 39	to add (*)
Char. 40	Japan to check whether state 5 to be deleted (i.e. to check whether example variety Hollywood has state 1: ground color not visible, with over color medium red or dark red) and to be indicated as PQ
Char. 43	to add (*), to provide illustration, to delete state 3 and to add example variety “Tiger” for state 1
Char. 44	to add (*)
Char. 45	to add (*)
Char. 48	to have notes 1, 2, 3
New 2 (after 52)	to read “Fruit: amount of fiber”, with the states: low (1); medium (2); high (3) and to be indicated as QN, VG
Char. 55	to add (*) and to be indicated as PQ
Char. 56	to add (*)
Char. 58	(+) to be deleted
Char. 59	to have notes 1, 2, 3
8.1	to check notes and allocation to characteristics, e.g. 8.1 (a) and Char. 4
Ad. 6	to be deleted
Ad. 12	new illustration to be provided in form of grid with photographs to be provided by Japan
Ad. 21	to be deleted
Ad. 24	to be amended to cover range of ratio length/width for each shape
Ad. 26	to invert illustrations and move obovate to column for broadest part “above middle”
Ad. 30, 31	to add illustration to show dimensions to be observed
Ad. 32	to invert illustrations and reverse illustrations in columns concerning position of broadest part “above” (= obcordate, obovate) and “below” middle (cordate)
Ad. 33	to add illustration
Ad. 34	to invert illustrations
Ad. 35	to invert illustrations
Ad. 40, 41, 42, 43	to be combined
Ad. 47	to add reference to Ad. 61
Ad. 48	to be provided
Ad. 50	to be provided to Leading Expert by Spain
Ad. 51	to be provided to Leading Expert by Spain
Ad. 54	to be completed and to provide illustration in form of grid
Ad. 58	to be deleted
Ad. 61	to read “The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed from the tree”

Lonicera caerulea L. var. *kamtschatica* Sevest (Blue Honeyberry)

69. The subgroup discussed document TG/LONIC(proj.1), as presented by Mr. Erik Schulte (Germany), and agreed the following:

Cover page	to add “Bush Honeysuckle” to English common name for <i>Lonicera caerulea</i> var. <i>edulis</i> Turcz. ex Freyn
Table of Contents	to check spelling of example variety “Altai”
Char. 3	to add (+) with explanation “The branching of the plant is considered to be the number of branches and the amount of lateral shoots.”
Char. 4	to add (*)
Char. 5	to have state (1) absent or very weak and to add (*)
Char. 6	to check whether to have states: yellow brown (1); light brown (2); dark brown (3); red brown (4) and to add (*) and to delete reference to RHS Colour Chart
Char. 7	to add (*)
Chars. 8, 9, 10	to remove “during rapid growth” and to add (+) with explanation “To be observed during rapid growth” under Chapter 8
Char. 8	to add note (a) and to consider reducing notes to 1 to 5
Char. 9	to read: “Shoot: glossiness of bark of tip” with states: absent or weak (1); medium (2); strong (3) and to be indicated as QN and add note (a) and to add (+)
Char. 10	to delete the even states and to have the notes 1 to 5 and to add note (a), and to add (+)
Chars. 11, 12, 13	to add (*)
Char. 14	to have states: acute (1); obtuse (2); rounded (3) and to be indicated as PQ and to add (+) with illustration
Char. 16	to read “..:intensity of green color...” and to reduce the notes to 1, 3, 5
Char. 17	to reduce the notes to 1, 3, 5
Char. 19	to reduce the notes to 1, 3, 5 and to add (*)
Char. 20	to read “Leaf: length of blade relative to length of petiole” and to add (*) and to add (+) with illustration indicating where to be observed and to reduce the notes to 1, 3, 5
Char. 21	to check whether to read: “Flower: pubescence of corolla tube” and to add (+) and to reduce the notes to 1, 3, 5
New Char.	to consider adding New Char. to read: “Flower: attitude” with the states: upright (1); horizontal (2); downwards (3) and to be indicated as QN
New Char.	to consider adding New Char. to read: “Flower: style length compared to anther length” with the states: shorter (1); equal (2); longer (3) and to be indicated as QN
New Char.	to read: “Sepal: length” with states: short (1); medium (3); long (5) and to add (*)
Char. 22	to add (*)
Char. 23	to read: “Fruit: width” with the states: narrow (3); medium (5); broad (7) and to add (*)
New Char.	to consider adding New Char. before Char. 24 to read: “Fruit: shape in cross section” with the states: oblate (1); elliptic (2); circular (3) and to be indicated as QN and to add (d)
Char. 24	to have states: ovate (1); obovate (2); oblong (3) and to add (*) and to add (d)
New Char.	to consider adding New Char. before Char. 25 “Fruit: shape at calyx end” with states: acute (1); rounded (2); flared (3); flat (4) and to add (+) with illustration and to be indicated as PQ and to add (d)

New Char.	to consider adding New Char. before Char. 25 “Fruit: size of eye opening” to have states: small (1); medium (3); large (5) and to add (+) with illustration and to be indicated as QN
Char. 25	to read: “Fruit: appearance of skin” with the states: smooth (1); intermediate (3); uneven (5) and to add (+) with illustration
Char. 26	to move Char. 26 after Char. 27 and to add (+) with explanation “The blue color of skin should be assessed after the removal of bloom” and to reduce the notes to 1, 3, 5
Char. 27	to reduce the notes to 1, 3, 5
Char. 28	to check whether truly QL
Chars. 29, 30	to add (*)
Ad. 3	to read: “The branching of the plant is considered to be the number of branches and the amount of lateral shoots”
Ads. 8, 9, 10	to read: “To be assessed during rapid growth”.
Ad. 17	to add “Ad. 18 Stem-clasping leaf: pubescence” to illustration
Ad. 20	to provide illustration
Ad. 24	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, position of broadest part etc. (see TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 21, Section 2.).
Ad. 25	to provide illustration
Ad. 26	to add explanation
Ad. 31	to delete “most”
TQ 1.1	to provide separate boxes for different subspecies
TQ 9.3	to be deleted

Olive (Olea europaea L.) (Revision)

70. The subgroup discussed document TG/99/4(proj.2), as presented by Mr. Hendrik Venter (South Africa), and agreed the following:

Cover page	to correct spelling to “Olea europaea L.” (also in GENIE)
2.2	to read “According to the specification of the authority, the material is to be supplied in the form of trees (one-year-old) on their own roots, or on one-year-old trees grafted on rootstock specified by authority”
5.3	to have Chars. 2, 15, 21, 22, 23, 24, 30, 36, 39, 42
6.1.2	to delete Spain explanation
Table of Chars.	to remove all figures and measurements (e.g. Chars. 5, 6 etc.)
Table of Chars.	- to correct example variety “Sevillana” and “Gordal Sevillano” to “Gordal Sevillana” and “Manzanilla” to “Manzanilla de Sevilla” - to correct example variety “Conservolia” to “Konservolia”
Chars. 1-3	to delete note (a)
Char. 3	to be indicated as QN
Char. 4	to read “...number of lateral shoots” and example variety for state 1 to be replaced
Char. 5	example varieties for state 5 to read “Picudo, , MGS ASC315”

Char. 7	to be indicated as QN and to have notes 3, 5, 7
Char. 8	to remove underlining and example variety for state 3 to read “Gordal Sevillana”
Char. 9	to have the states: incurved (Picual) (1); straight (Galego) (2); recurved (Zarza) (3) and to amend the order of the illustrations in Ad. 9 accordingly
New 1 (after 9)	to read “Leaf blade: twisting”, with the states absent or weak (1); moderate (2); strong (3), to be indicated as QN, VG
Char. 12	to read “Flower: attitude of corolla lobe”
Char. 15	to add (+) with explanation, to delete example varieties for state 1 and to have “Koroneiki” as the example variety for state 3
Char. 17	to have the states: slightly elongated (Manzanilla de Sevilla) (3); moderately elongated (Frantoio) (5); very elongated (Cornezuelo de Jaen) (7)
Char. 19	example varieties for state 2 to read “Ascolana Tenera, MGS ASC315”
Char. 21	example variety for state 1 to read “Ascolana Tenera”
Char. 22	state 1 to read “symmetric”
Char. 23	to delete “pointed”
Char. 25	to be indicated as QN and to have the states: rounded (Gordal Sevillana MGS GRAP541) (1); rounded to truncate (2); truncate (Manzanilla de Sevilla) (3)
Char. 26	to read “Fruit: bloom of surface” and to correct spelling of example variety for state 1 to “Coratina”
Char. 27	to be deleted
Char. 28	to be deleted
Char. 29	to correct spelling of example variety for state 3 to “Hojiblanca”
Char. 30	to have the states: slightly elongated (Arbequina) (1); moderately elongated (Barouni) (2); very elongated (Bella di Cerignola) (3)
Char. 31	state 1 to read “symmetric” and example variety for state 1 to read “Arbequina”
Char. 32	state 1 to read “symmetric”
Char. 33	to add (*)
Char. 34	to add (*) and to have the states: evenly distributed (Hojiblanca, MGS GRAP541, MGS Mariense) (1); weakly grouped around suture (2); strongly grouped around suture (Villalonga) (3), with example varieties to be provided to the Leading Expert by Spain
Char. 37	to replace “Tomatillo” with “Azapa” (state 3)
Char. 38	to be deleted
Char. 39	to be indicated as QN, to read “Stone: rugosity of surface”, with the states: weak (1); medium (2); strong (3)
Char. 40	to be moved before Char. 30 and example variety for state 5 to read “Konservolia”
Char. 41	to be moved before Char. 30
Char. 42	to be moved before Char. 30, to delete example variety for state 1 and to add example variety “Arbequina” and delete example variety “Hojiblanco” for state 3
8.1 (a)	to be deleted and explanation that “observations should be made on 25 fruiting branches distributed over the trees” to be added to Ad. 4
8.1 (d)	to provide illustration
Ad. 10, 11	individual state illustrations to be deleted and to show part to be observed on complete plant
Ad. 12	to turn illustration through 90 degrees and show only one corolla
Ad. 16	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, position of broadest part etc.
Ad. 24	photograph for state 2 to be replaced

Ad. 25	Spain to provide new illustrations for states 1 and 3 to Leading Expert
Ad. 26	to add “by rubbing”
Ad. 29	to amend to show range of ratio length/width for each shape and to provide improved photographs for states 1, 2 and 4
Ad. 31, 32	to orientate photographs to face same direction
Ad. 33	Spain to provide new illustrations for states 1 and 3 to Leading Expert
TQ 1	to delete 1.3
TQ 5	to have Chars. 2, 15, 21, 22, 23, 24, 30, 36, 39, 42
TQ 6	to provide example from Table of Chars.
TQ 7.2	to be deleted
TQ 7.4	to be deleted
TQ 9.3	to be deleted

Pecan nut

71. The subgroup discussed document TG/PECAN(proj.7), as presented by the Office of the Union in the absence of Mr. Marcelo Labarta (Argentina), and agreed the following:

Cover page	to check whether to add the following names in GRIN: <ul style="list-style-type: none"> – Hickorynußbaum (Source: S. Reichel, p.c.) – German – Pekannußbaum (Source: Dict Rehm) – German – nogal americano (Source: Dict Rehm) – Spanish – pecán (Source: Dict Rehm) – Spanish – pecana (Source: B. León, p.c.) – Spanish – pecanero (Source: Dict Rehm) – Spanish
1.	to delete “(Juglandaceae)”
4.4	to be deleted
Table of Chars.	to indicate method of observation: MG, MS, VG, VS, for all characteristics
Char. 1	to add (+)
Char. 2	to add (+) with explanation
Char. 3	to be indicated as PQ
Char. 4	to read “One-year-old shoot: ...”
Char. 5	to add (+) with explanation of when and where to observe (e.g. add to Ad. 6)
Char. 8	to check whether 9 states are intended (to consider what state 1 would be)
Char. 11	to add (+) and provide illustration
Char. 12	- to check notes (1, 5, 7) - to add (+) and provide illustration
Char. 13	- to check whether possible to delete underlined part - to have the states: towards base (1); at middle (2); towards apex (3)
Char. 16	to read “Stigma: splitting” and to be indicated as QN
Char. 17	example varieties to be provided
Char. 25	to delete “with suture at top”
Char. 27	to delete (+) and state 1 to read “absent or short”
Char. 28	to check whether to read “Nut: main color”, with the states light brown (1); medium brown (2); dark brown (3)
Char. 34	to check whether to read “Kernel: color” with the states light brown (1); medium brown (2); dark brown (3)

Char. 35	to add (+) with explanation (% of plants with ...)
Char. 36	to add (+) with explanation (% of plants with ...)
Char. 39	to add (+) with explanation and to correct spelling of “beginning”
Table of Chars.	to check whether to add (*) to further characteristics, for which example varieties would need to be provided, particularly for (*) QN & PQ characteristics
Ad. 6 etc.	to read “To observe on fully developed leaves on the middle third of branches growing in the current year.”
Ad. 16	to amend according to states in the Table of Chars.
Ad. 19	to add arrow to indicate ribs
Ad. 21, 22	to be deleted and add lines to show lateral and ventral width for the 2 illustrations in Ad. 20
Ad. 23 and 24	to provide illustration in form of grid to show elements of variation, e.g. ratio length/width, position of broadest part etc. (see TGP/14/1 Draft 11: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 21, Section 2.). Example (from Olive)
Ad. 38	to provide from Frusso, E. reference
TQ 6	to be provided
TQ 7.3	to check whether to be deleted

Pineapple (Ananas comosus (L.) Merr.)

72. The subgroup discussed document TG/PINEAP(proj.6), as presented by Mr. Richard Brand (France) agreed the following:

1.1	to delete reference to family
4.1.4	to reduce number of plants to 15
Char. 1	to move “(before flowering)” to Ad. 1
Char. 2	to move “(produced from 4 months after planting to floral induction)” to Ad. 2 and to be indicated as QN and MS
Chars. 3, 4	to be indicated as MS
New Char.	to read: “Leaf: green color of upper side” with states: light (3); medium (5); dark (7) and to provide example varieties and to be indicated as QN and VG
New Char.	to read: “Leaf: anthocyanin coloration” with states: absent or very weak (1); weak (2); medium (3); strong (4); very strong (5) and to provide example varieties and to be indicated as QN and VG
Chars. 5, 6, 7	to be deleted
Char. 8	to add (+) with illustration indicating groove and to be indicated as VG and example variety “BRS Imperial” to be added to state (2)
Char. 9	to delete “(hairs)” and to check wording of state (1) and to delete note (a) and to add (+) and provide explanation on where to observe and that trichomes should be considered as the hair on leaves and to be indicated as VG
New Char.	to read: “Leaf: expression of spines” with states: absent or very weak (1); weak (3); medium (5); strong (7) and to add (+) with explanation and to be indicated as QN and VG
Char. 10	to be deleted
Char. 11	to delete “(piping)” and to move before new Char. 10 and to provide illustration and explanation and to reduce number of example varieties for state (3) and to be indicated as VG

Char. 12	to be deleted
Char. 13	to delete underlined text and to be indicated as VG and to move example variety “Smooth Cayenne” to state (3)
Char. 14	to delete underlined text and to be indicated as VG and to have example varieties “Gold” for state “yellowish green” and “Gomo de Mel” for state “red” and to indicated notes
Char. 15	to delete underlined text and to reduce the notes to 1, 2, 5 and to be indicated as VG
Char. 16	to move “(before fruit development)” to Ad/ 16 and to have notes 1, 2, 3 and to be indicated as VG
Char. 17	to delete
Char. 18	to delete existing state (1) and to have states: blue purple (1) and red purple (2) and to inverse example varieties and to check if QL and to be indicated as VG
Char. 19	to reduce notes to 1, 2, 3 and to be indicated as VG/MG
Chars. 20, 21	to be indicated as VG
Char. 23	to move text in brackets to Ad. 23 and to have states: grey (1); medium green (2); dark green (3); pink (4); medium red (5); purple (6); brownish purple (7); dark brown (8) and to be indicated as PQ and VG and to have example variety “Smooth Cayenne” for state (3) and “Roxo de Tefe” for state (7)
Char. 24	to have notes 1, 2, 3 and to be indicated as VG
Char. 25	to be deleted
Char. 26	to correct spelling of “height” and state (7) to read: “tall” and to add example varieties to state (5) “Smooth Cayenne, BRS Imperial” and change “Rondon” to state (3) and to be indicated as VG
Char. 27	to be deleted
Char. 28	to add example varieties: “BRS Vitoria” for state (3) and “BRS Imperial” for state (5) and to be indicated as MS and to have notes 1, 2, 3
Char. 29	to move “(at middle)” to Ad. 29 and to be indicated as MS
Char. 30	to be indicated as VG
Char. 31	to be deleted
Char. 32	to be indicated as VG and to check example varieties
Char. 33	to delete state (5) and to be indicated as VG and to check example varieties
Char. 34	to reduce to notes 1, 2, 3 and to move “at fruit harvest” to Chapter 8 and to be indicated as VG
Char. 35	state (1) to read: “absent or very few” and to be indicated as VG to delete (+)
Char. 36	example variety “Smooth Cayenne, Gold” (3); and “BRS Imperial” (7) and to add (+) to be indicated as VG
Char. 37	state (1) to read: “upright” and to delete state (4) and to be indicated as VG
Char. 38	to be indicated as VG and to delete (+)
Char. 39	to check shapes states against TGP/14 to read: narrow ovate (1); medium ovate (2); oblong (3); elliptic (4); circular (5) and illustrate with grid and to be indicated as VG and BR to provide photographs
Char. 40	to move text in brackets to Ad. 40 and to be indicated as VG/MS and to add “BRS Imperial” to state (5)
Char. 41	to add example variety “BRS Imperial” for state (3) and to be indicated as VG/MS

Char. 42	to have states: white cream (1); yellow green (2); green (3); grey green (4); light yellow (5); medium yellow (6); orange (7); orange red (8); red (9); brown (10) and to check order of states and to add example varieties: “BRS Vitoria” (4); “Smooth Cayenne” (5); “Gold” (8); “Roxo de Tefee, Manzana” (9) and to be indicated as VG
Char. 43	to read: “Fruit: neck” and to provide illustration and to add example varieties “BRS Imperial, BRS Vitoria” for (state 1)
Char. 44	to be indicated as MS/VG and to have new example varieties “Pouco conhecida, Sugiro Cabezona” for state 9
Char. 45	to be indicated as VG and to have example varieties: “BRS Vitoria, Gold, Perola” (1); “BRS Imperial” (5)
Char. 46	to be indicated as VG
Char. 47	state (1) to read: “sunken” and to be indicated as VG
Char. 48	to add example variety “BRS Imperial” for state (3) and to read: “strongly uneven” for state (3) and to delete (+)
Char. 49	to read: “Fruit: size of floral bract relative to size of eye” and to be indicated as VG and state (4) to read: “same”
Char. 50	to add example variety “Manzana” to state (3)
Ad. 10	to be deleted
Ad. 11	explanation to be deleted and to provide illustration
Ad. 12	to be provided
Ad. 13	illustration to be replaced
Ad. 25	to be provided
Ad. 26	to be provided
Ad. 27	to add explanation
Ad. 36, 37	to translate into English
Ad. 38	to be deleted
Ad. 39	to provide grid as per TGP/14 and to use BR photographs

Pomegranate (*Punica granatum L.*)

73. The subgroup discussed document TG/PGRAN(proj.1), as presented by Mr. Pedro Miguel Chomé Fuster (Spain) and Mr. Guillermo Soler Fayos (Spain), and agreed the following:

Cover page	to add alternative names: Pomegrante (E), Grenadier (F), Granatapfelbaum; Granatapfelstrauch; Granatbaum (G)
1.	to read: “These Test Guidelines apply to all varieties of <i>Punica granatum L.</i> ”
2.3	to delete “virus-tested” and to reduce number to 5
Table of Chars.	Proposals of New Chars. to be sent to leading expert by e-mail
Char. 1	to read: “Plant: vigor” and to add (*) and to be indicated as VG
Char. 2	to read: “Plant: habit” and to be indicated as PQ and VG
Char. 3	to read: “Plant: intensity of grey color of bark” with states: light (1); medium (2); dark (3) and to add (+) with an explanation and to be indicated as QN and VG and to add (*)
Char. 4	to be indicated as VG

Char. 5	to read: “One-year-old shoot: number of thorny ended” and to change states to: absent or very few (3); medium (5); many (7)
Char. 6	to read: “Young shoot: number of leaves per node” with states: predominantly 2 (1); predominantly 3 or more (9) and to check whether QL and to be indicated as VG
Chars. 7, 8	to be indicated as MS
Char. 9	to check whether to use meaningful states (check order compared to current characteristic), e.g. very elongated (1); moderately elongated (3); medium (5); moderately compressed (7); very compressed (9) (see TGP/14/1 Draft 11: Section 2: Botanical Terms Subsection 2: Shapes and Structures: I. SHAPE, page 16)
Char. 10	to add state (9) “rounded” and to add (+) with illustration and to be indicated as QN
Char. 11	to be indicated as MS
Char. 12	to delete “intensity of” and to be indicated as VG
Char. 13	to replace “predominant” with “main” and to have states: orange (1); orange red (2); pink (3); medium red (4); dark red (5); purple (6) and to add (+) with explanation “Identify the color of the calyx when the sepals are closed.” and KR to provide photographs and to be indicated as VG
Char. 14	to replace “predominant” with “main” and to add state (2) yellow and to add (+) with explanation “Identify the color of the corolla when the flower is fully open.” and to add (*) and to be indicated as VG
Char. 15	to read: “Petal: length” and to have the states: short (3) ... (long (7) and to be indicated as MS
Char. 16	to read: “Petal: width” and to be indicated as MS
New Char.	to read: One-year-old shoot: number of flowers per node”
New Char.	to read:
Char. 17	to read: “Flower: calyx length” and to have the states: short (3) ... (long (7) and to move before Char. 13 and to be indicated as MS
Char. 18	to read: “Flower: calyx width” and to be indicated as MS and to move before Char. 13
Char. 19	to read: “Flower: ratio length/width of calyx” and to use meaningful states (check order compared to current characteristic), e.g. very elongated (1); moderately elongated (3); medium (5); moderately compressed (7); very compressed (9) (see TGP/14/1 Draft 11: Section 2: Botanical Terms Subsection 2: Shapes and Structures: I. SHAPE, page 16) and to be indicated as MS and to move before Char. 13
Char. 20	to read: “Calyx: color change” and add (+) with explanation and to be indicated as QL and to be indicated as VG and to add (*)
Char. 21	to read: “Fruit: height” and to be indicated as MS and to add (+)
Char. 22	to be indicated as MS and to add (*)
Char. 23	to read: “Fruit: ratio height/diameter and to use meaningful states (check order compared to current characteristic), e.g. very elongated (1); moderately elongated (3); medium (5); moderately compressed (7); very compressed (9) (see TGP/14/1 Draft 11: Section 2: Botanical Terms Subsection 2: Shapes and Structures: I. SHAPE, page 16) and to be indicated as MS
Char. 24	to be indicated as MS
Char. 25	to check states and to be indicated as QN
Char. 26	to read: “Fruit: color” and to add (*) and to check color of states: orange (1); orange red (2); pink (3); pink red (4); medium red (5); red purple (6); purple (7); dark purple (8) and to be indicated as MG

Char. 27	states to read: thin (3); medium (5); thick (7) and to be indicated as MS
Char. 28	to add (+) with explanation “Calculation of total soluble solids measured using a refractometer. The measured unit is the degree Brix (degrees Brix) corresponds to 1 gram of sucrose in 100 grams of solution.” <u>and</u> to be indicated as MG
8.1 (c)	to read: “All observations on the leaf should be made on mature leaves on the middle third of the branch from the current season’s shoots and on nodes with low number of leaves.”
8.1 (d)	to read: “All observations should be made on the female flowers at the time of full flowering and on fully opened flowers.”
8.1	Ad. titles / numbering to be checked
Ad. 1	explanation to read: “The vigor of the plant should be considered as the overall abundance of vegetative growth at the top of the plant.”

Red and White Currant (Ribes sylvestris (Lam.) Mert. & W.O.J. Koch) (Revision)

74. The subgroup discussed document TG/52/6(proj.2), as presented by Mr. Erik Schulte (Germany), and agreed the following:

Cover page	Alternative names to read:
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Botanical name	English	French	German	Spanish
<i>Ribes rubrum</i> L.; <i>Ribes sylvestris</i> (Lam.) Mert. et W.Koch; <i>Ribes vulgare</i> Lam.; <i>Ribes sativum</i> (Rchb.) Syme	Red Currant, White currant	groseillier commun, groseillier rouge	Rote Johannisbeere, Weiße Johannisbeere	grosellero común, grosellero rojo

3.1.3	to move to Chapter 3.1.1
4.1.4	to read “Unless otherwise indicated, all observations should be made on 5 plants or parts taken from each of 5 plants” and to be moved to Chapter 3.
Char. 1	to delete example variety “Heros”
Char. 2	to read “Plant: density of shoots” and to add (*)
Char. 3	to add (+) and provide illustration and to delete example variety “Frauendorfii”
Char. 5	to add (+) and provide illustration and to add (*)
Char. 6	to add (*)
Char. 7	to add (+) and provide illustration, to add (*) and to delete all example varieties
Char. 9	to add (*) and to replace notes 3, 5, 7 with 1, 3, 5
Char. 10	to read “Young shoot: anthocyanin coloration”, to add (+) with explanation that observations should be made on the leaf and shoot at the stage of rapid growth, to delete note (c) and to replace notes 1, 3, 5, 7, 9 with 1-5
Chars. 12, 13, 14	to read “Leaf blade: ...” and to be indicated as VG/MG
Char. 12	to add (*)
Char. 13	to add (*)
Char. 14	to add (+) and provide illustration and example varieties to be provided

Char. 15	to check whether Char. 15 provides additional discrimination compared to Char. 11. If retained, to replace notes 3, 5, 7 with 1, 3, 5 and to add (*)
Char. 16	to read “Petiole: thickness”, to add (*) and to replace notes 3, 5, 7 with 1, 3, 5
Char. 17	to add (+) with explanation that the total number of flowers should be observed, whether open or not, and to add (*)
Char. 18	to read “Inflorescence: anthocyanin coloration of rachis” and to add (*)
Char. 19	to add (*)
Char. 20	to add (+) and provide illustration and to replace notes 1, 3, 5, 7, 9 with 1-5
Char. 21	to add (*)
Char. 22	to be indicated as VG/MG and to read “Fruit truss: length excluding stalk” and to amend illustration and check the example varieties
Char. 23	to be indicated as VG/MG, to add (+) and provide illustration and to check whether to be deleted (if no additional discrimination to Char. 22)
Char. 24	to read “Fruit truss: density of berries” and to add (*)
Char. 26	to add (*)
Char. 27	to have the states: white (Bar le Duc, Blanka, Versailles Blanche, Witte Hollander Witte Parel, Zitavia) (1); pink (Hossfurtu, Rosa Hollander, Rosa Sport) (2); light red (Präkanda) (3); medium red (Jonkheer van Tets, Rondon, Rotet, Victoria, (4); dark red (Jobes 88, Laxton's Perfection, Mulka, Roodneus, Stanza) (5).
Char. 28	to add (*)
8.1	to correct notes to (a) to (e) and to read: <ul style="list-style-type: none"> (a) observations should be made on unpruned bushes in the dormant season. (b) observations on the bud should be made at the time when they begin to swell. (c) unless otherwise stated, all observations should be made at the stage of fully developed leaves at fruit maturity on the upper third of typical one-year-old shoots. (d) observations should be made at the time of full flowering. (e) observations should be made at the time of beginning of fruit ripening (see Ad. 30)
Ad. 16	to add arrow to indicate position to observe characteristic
Ad. 20	to be provided
Ad. 22	to be amended
Ad. 26	to add (+) and provide illustration in form of grid (see TGP/14/1 Draft 9: Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE page 19, Section 2.1.3 and page 28)
Ad. 30	to read “The time of beginning of fruit ripening is when the fruit starts to be easily removed from the plant.”
8.3	second line to read:

Example varieties	Synonym(s)
Red Dutch	Rode Hollander, Rote Holländische

	and to replace “Rode Hollander” with “Red Dutch” in the Table of Chars.
TQ 1	to be updated

Mandarins (Citrus; Grp I) (Partial Revision)

75. The TWF discussed document TWF/41/28, as presented by Mr. Pedro Miguel Chomé Fuster and Mr. Guillermo Soler Fayos (Spain).

76. The TWF agreed to propose to the Technical Committee to adopt the partial revision of the Test Guidelines for Mandarin on the basis of document TWF/41/28 with the reservation of experts from Morocco with regard to the proposed new characteristic (after characteristic 98) “Fruit: number of seeds (controlled manual cross-pollination)”, for which the experts from Morocco explained that more time was needed for study of the new characteristic. The TWF agreed that the Technical Committee should be invited to consider the “Comments of Morocco concerning the new characteristics proposed ‘Fruit: number of seeds (controlled manual crosspollination) and pollen viability in the UPOV Test Guidelines for Mandarin”, as set out in Annex VI to this document, in conjunction with its consideration of the proposed partial revision of the Test Guidelines for Mandarin.

Information and databases*(a) UPOV information databases*

77. The TWF noted the information provided in document TWF/41/5 and agreed to check the new UPOV codes added to the GENIE database and UPOV code amendments, as set out in Annex II to document TWF/41/5, and to send any comments on the additions and amendments to the Office by November 1, 2010.

(b) Variety description databases

78. The TWF noted the developments reported in document TWF/41/6 and heard that the TWV, at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, had discussed the substantial potential benefits in developing a database containing pea variety descriptions from members of the Union, at least for grouping characteristics as first step, and had agreed that Mr. Boulineau (France) should make a presentation on his concept at the forty-fifth session of the TWV. The TWF agreed that it would be useful to receive a report on that initiative at its forty-fourth session. With regard to the information provided in document TWF/41/6, paragraph 5, on the project on the “Management of peach tree reference collections”, the TWF noted that the database would not be restricted to protected varieties because it was intended to include varieties of common knowledge.

79. The TWF noted the development of standard references provided in document TWF/41/10, would be a good basis for exchanging variety description information in an efficient way for different languages. It also noted that it would be important for the date and place where the variety description was produced to be included. The TWF also confirmed the importance of publishing a disclaimer concerning the information on the status of such documents, as well as its appropriate use.

80. The representative of CIOPORA reported that CIOPORA and ISF were not in favor of the publication of variety descriptions before the grant of the breeder’s right. The expert from the European Union explained that, with regard to the CPVO database reported in document TWF/41/6, paragraphs 6 and 7, descriptions of varieties protected since December 2008 would be published, but the descriptions of parent lines would not be published.

(c) *Exchangeable software*

81. The TWF noted the developments reported in document TWF/41/7.

(d) *Electronic application systems*

82. The TWF noted the developments reported in document TWF/41/8.

Assessing uniformity by off-types on the basis of more than one sample or sub-samples

83. The TWF noted the developments reported in document TWF/41/9.

Experiences with new types and species

84. The expert from the European Union reported that the CPVO was making increasing use of cooperation with members of the Union outside the European Union, in order to address the examination of varieties of exotic fruit species new to the CPVO.

85. The expert from New Zealand reported on breeding developments in hybrid pears (Japanese, Chinese and European) and indicated that he might have information on which to make a presentation at the forty-second session of the TWF, with a possible view to a revision of the relevant Test Guidelines.

86. An expert from Israel reported that some applications had been received for hybrids between Apricot & Japanese Plum, although the numbers were very low: relevant characteristics were taken from the two relevant Test Guidelines.

Proposals for Partial Revision/Corrections of Test Guidelines

87. The TWF considered the proposal to replace Chapter 8.1 (d) in the Test Guidelines for Strawberry as set out in document TWF/41/29 and agreed that a partial revision should be considered at its forty-second session.

Matters to be resolved concerning Test Guidelines adopted by the Technical Committee

88. The TWF noted that the TC, at its forty-sixth session, held in Geneva from March 22 to 24, 2010, had agreed that the Test Guidelines for Banana and the Test Guidelines for Fig be adopted subject to the amendments to the example varieties, proposed by the Leading Expert, being approved by the TWF by correspondence and noted that those approvals had been received.

Recommendations on draft Test Guidelines

89. The TWF agreed that the following draft Test Guidelines should be sent to the TC for adoption at its forty-seventh session, to be held in Geneva on April 4 to 6, 2011, on the basis of the following documents and the comments in this report:

Acerola (<i>Malpighia emarginata</i> DC)	TG/ACERO (proj.2)
Almond (<i>Prunus amygdalus</i> Batsch) (Revision)	TG/56/4 (proj.2)
Cacao (<i>Theobroma cacao</i> L.)	TG/CACAO (proj.3)
Dragon-fruit (<i>Hylocereus undatus</i> (Haw.) Britton et Rose)	TG/DRAGON (proj.4)
Gooseberry (<i>Ribes uva-crispa</i> L.) (Revision)	TG/51/7 (proj.2)
Japanese plum (Revision)	TG/84/4 (proj.3)
Mandarin (Citrus; Grp 1) (Partial Revision)	TG/201/1 and TWF/41/28
Olive (<i>Olea europaea</i> L.) (Revision)	TG/99/4 (proj.2)
Red and White Currant (<i>Ribes sylvestre</i> (Lam.) Mert. & W.O.J. Koch) (Revision)	TG/52/6 (proj.2)

90. The TWF agreed to re-discuss the following draft Test Guidelines at its forty-second session:

<i>Acca sellowiana</i> (Berg) Burret
* <i>Actinidia</i> Lindl. (Kiwifruit) (Revision)
Apple rootstocks (<i>Malus</i> Mill.)(Revision)
<i>Fortunella</i> Swingle
<i>Litchi</i> Sonn.
<i>Lonicera caerulea</i> L. var. <i>kamtschatica</i> Sevest (Blue Honeyberry)
*Papaya (<i>Carica papaya</i> L.) (Revision)
*Pecan nut
*Pineapple (<i>Ananas comosus</i>)
Pomegranate (<i>Punica granatum</i> L.)
*Strawberry (Partial revision for Chapter 8.1 (d))
Vanilla Mill.

Guidance for drafters of Test Guidelines

91. The TWF received a presentation on the assistance provided on the UPOV TG webpage for drafters of Test Guidelines, a copy of which is provided as Annex VII to this document. The TWF heard that, at its forty-sixth session, the TC had agreed on the plans of the Office of the Union to make copies of all previous adopted versions of Test Guidelines available on the first restricted area of the UPOV website.

* indicates possible final draft Test Guidelines

Date and place of the next session

92. At the invitation of the expert from Japan, the TWF agreed to hold its forty-second session in Japan, from November 14 to 18, 2011.

93. The TWF noted that Australia (TWO) and New Zealand (TWF) had offered to jointly host the TWO and TWF sessions in April / May 2013 and expressed its support for that offer. The TWF noted the need to consider an appropriate timing for the TWF session in 2012 with regard to the timing of the sessions in 2011 and 2013.

94. The TWF noted the expression of interest of Israel to host the TWF session in 2012.

Chairperson

95. The TWF agreed to propose to the TC that it recommend to the Council to elect Mrs. Carensa Petzer as the next chairperson of the TWF.

Future program

96. The TWF proposed to discuss the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
 - (a) Reports from members and observers (oral and written reports by the participants)
 - (b) Reports on developments within UPOV (oral report by the Office of the Union)
4. Molecular techniques:
5. TGP documents
6. Variety denominations
7. Information and databases
 - (a) UPOV information databases
 - (b) Variety description databases
 - (c) Exchangeable software
 - (d) Electronic application systems
8. Assessing uniformity by off-types on the basis of more than one sample or sub-samples
9. DUS examination of seed-propagated varieties of Papaya
10. Experiences with new types and species
11. Proposals for Partial Revision/Corrections of Test Guidelines (if appropriate)
12. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee

13. Discussion on draft Test Guidelines (Subgroups)
14. Recommendations on draft Test Guidelines
15. Guidance for drafters of Test Guidelines
16. Date and place of next session
17. Future program
18. Adoption of the Report of the session (if time permits)
19. Closing of the session

97. With regard to agenda item 3(a), the TWF agreed to invite experts to submit written reports to the Office of the Union in advance of the TWF session in order that a document could be prepared by the Office of the Union. In making that suggestion, the TWF noted that experts would still be invited to make a brief oral summary report at the session and would also be encouraged to make reports under agenda item 10. “Experiences with new types and species”

Technical Visit

98. On the morning of Wednesday, September 29, the TWF visited *Vivero Yautepec*, a privately owned nursery, hosted by the owner, Mr. Frank Magdahl and his daughter, Ms. Inés Magdahl. The visit was organized by SNICS. Ms. Mayra Hernández, the Manager of the National Seed Association (AMSAC), hosted a lunch reception, which followed the visit.

99. *The TWF adopted this report at the close of the session.*

[Annexes follow]

ANNEX I

AUSTRALIA



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MEXICO



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[Annex II follows]

WELCOME ADDRESSES

WELCOME ADDRESS FROM THE REPRESENTATIVE OF THE MINISTRY OF AGRICULTURE, LIVESTOCK, RURAL DEVELOPMENT, FISHERIES AND FOOD FOR THE TECHNICAL WORKING PARTY ON FRUIT CROPS OF THE INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS (UPOV)¹.

- Mr. Bernardo Pastrana Gómez, Head of the Agricultural Development Department from the State of Morelos. Thank you very much for your kind support to host these meetings.
- Mr. Rolf Jördens, Vice-Secretary General of the International Union for the Protection of New Varieties of Plants (UPOV). It's a great honor for us to have you here in our country. I hope you are enjoying your staying.
- Mr. Peter Button, Technical Director of UPOV.
- Bronislava Bátorová, Chairwoman of the Technical Working Party for Fruit crops, welcome to our country.
- Mr. Alejandro Barrientos-Priego, Head of Mexican Delegation at TWF.
- Distinguished Researchers, Growers and Authorities from Mexico and abroad.

On behalf of the Minister of Agriculture, Livestock, Rural Development, Fisheries and Food, Francisco Mayorga, please receive a warm welcome and our acknowledgement to research institutions, growers and authorities who organized this meeting.

It is a great honour for Mexico to host the meeting of the Technical Working Party for Fruit Crops that is beginning today. We are pleased to have experts and authorities from fifteen countries and representatives from three International Organizations.

For our country, to host these meetings will offer the opportunity to share knowledge and experiences that will strength the plant breeder's rights system, in our country and at international level. Plant breeder's rights promote new technologies and benefits to the agricultural sector.

Due to the support from institutions, breeders and farmers, we have built and strengthened our capacities on plant variety protection, always under the coordination and leadership of SNICS. This effort has been complemented with an increasing and active participation of our country in UPOV. Plant Breeders` System is an essential condition to promote research, investment and technological development in Mexico. That's why Mexico's participation in UPOV activities, especially in the Technical Working Parties, is fundamental for us to improve technical knowledge and promote research.

Agricultural research is critical to respond challenges for food and agriculture. For this reason, the Ministry of Agriculture will increase three times the currently budget provided to plant breeding.

Finally, I would like to thank UPOV Technical Working Parties Organizing Committee, for their kind support to make possible this meeting. I wish you the best results and a successful meeting.

¹ Speech given by José Arnulfo del Toro Morales, representative from the Minister of Agriculture, in the opening session of the Technical Working Party for Fruit crops of the International Union for the Protection of New Varieties of Plants (UPOV), September 27 to October 1st.

WELCOME ADDRESSES

WELCOME ADDRESS FROM THE AGRICULTURAL DEVELOPMENT DEPARTMENT, FOR THE TECHNICAL WORKING PARTY FOR FRUIT CROPS OF THE INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS (UPOV)².

Welcome international and national guests and friends from Morelos State.

Rolf Jördens. Vice-Secretary General of the International Union for the Protection of New Varieties of Plants (UPOV), we are so honored to have you here in Mexico, especially in Morelos State, we hope that your job in this session will be successful and you enjoy your stay in our country.

Peter Button. Technical Director of UPOV, which is integrated by 67 countries and the European Union, it was created in 1961 and Mexico has been a member since 1997.

Bronislava Bátorová, Chairwoman, who will be leading this technical working session for fruit crops during this week. I would like to recognize your job on behalf of our government, so that you can achieve better results. We hope that we can contribute to these efforts.

Arnulfo del Toro Morales. Representative of the Ministry of Agriculture, I just want to thank you all the support you have given us.

Alejandro Barrientos-Priego, Head of the Mexican Delegation in TWF, I am so glad to have you here, and I am proud that you are working on behalf of our country in such an important event.

And to all of you, participants of this 41st session I would like to thank you for your great effort, in particular for your determination in order to obtain excellent results in your working area.

We are pleased that Cuernavaca, Morelos, Mexico and (the everlasting spring city) was appointed to host the Forty - First session of the Technical Working Party for Fruit Crops. Our deep thanks.

Strategies to enhance productivity includes for example, a better use of water and the way we handle it in order to get advantage of the great benefits of our state. Nowadays, with the hard work of farmers, growers and enterprises we have been considered as a very important state for fruit crop sector. Morelos has given special relevance to the production of ornament fish, which is over 20 million per year. We also had an important production on ornamental plants; this fact distinguishes us as the [everlasting](#) spring city.

As it was mentioned before, intensive activities are regarded as priority for Morelos state. Therefore there are four priority lines in our governmental administration that enlist as it follows: fruit production,

² Speech given by Bernardo Pastrana Gómez, Secretary of Agricultural Development of the Government of the State of Morelos, in the opening session of the Technical Working Party for Fruit crops of the International Union for the Protection of New Varieties of Plants (UPOV), September 27 to October 1st.

WELCOME ADDRESSES

ornamentals, vegetables and ornament fish production. All of them are produced in such small surfaces, this fact will help to improve yield and increase value of products.

Finally I would like to thank each of you for your great effort and enthusiasm, please count on me so that together we will develop this [purpose](#) successfully. On behalf of Marco Adame Castillo, Governor of Morelos State, we welcome all of you with our arms wide open. We hope you achieve results that could be applied directly in our primary activity in Morelos, so that we can keep on working hard in fruit crop production.

Welcome to our country!

[Annex III follows]



Background

SNICS
-Body of the Minister of Agriculture (SAGARPA)
-Created by Seed Law (1961)

Mission
To establish and keep updated the system to regulate and promote seed, plant varieties registry and plant genetic resources issues, collaborating to increase agricultural productivity and its competitiveness, according to international standards

Activities

- Seed testing, inspection and certification
- Plant breeders' rights
- Plant genetic resources

SINAREFI
PGR National System

	Ministry	Co-sourcing	Total
Headquarters	15	40	55
Delegations	100	45	145
Total	115	85	200

Plant Breeders' Rights

Plant Variety Protection in Mexico

- PVP Law (1996)
- 1978 Act (UPOV member since 1997, #34)
- Protection to all genera and species
- Farmer privilege (exception to PBR) → only for agricultural crops
- Information provided by the own breeder
- Cooperation CPVO, FR, NL (DUS testing results)
- Plant Variety Committee
 - technical working groups
 - specialists for each genus or species (including breeders and growers)
 - agreements between SNICS and several research and academic institutions
- Reference collections: agricultural crops, Opuntia (cactus pear and xoconostles), avocado, strawberry and rose.

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Annex III, page 2
PLANT VARIETY PROTECTION IN MEXICO



Enforcement

- Awareness
- Meetings, workshops, diffusion
- Verification and investigation of administrative infringements
- Measures to prevent infractions
- Penalties (\$9 to 44 thousand US dollars)



Training



DUS Workshop 2010



Svics



UPOV-Mexico

- TWP's Venue: TWA (2001), TWC (2002), TWV (2006), TWO&TWF (2010)
- Presidency of the Council (2003-2006)
- TWF Chairperson (2006-2008)
- TC Vice-President (2011-2013)
- Collection of reference (husk tomato, PO; amaranth, HU, BR)
- Test Guidelines: cactus pear, avocado, dahlia, tagetes, husk tomato, amaranth, papaya, hawthorn, dragon fruit, chayote...
- Distance learning (tutors), workshop COYD-COYU (2002), DUS workshop



Graphic Handbooks

Debil Weak Media Medium Fuerte Strong



COUNTRY REPORTS



PBR statistics from Israel

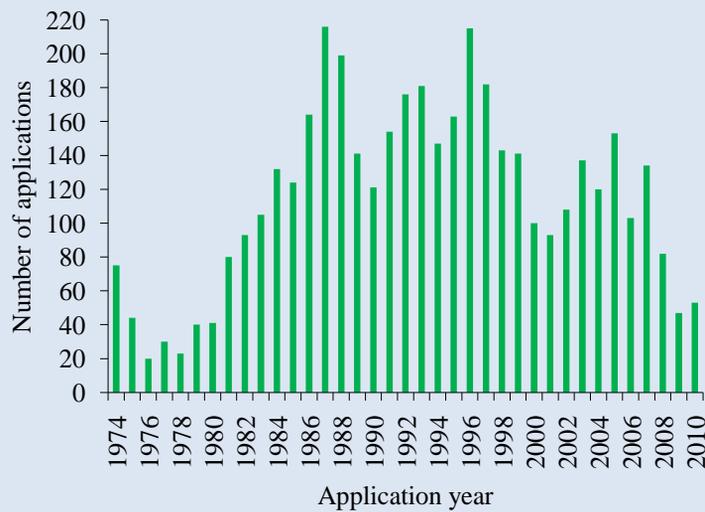
Ben-Zion Zaidman, Ph. D.

TWF 41

Cuernavaca, Mexico



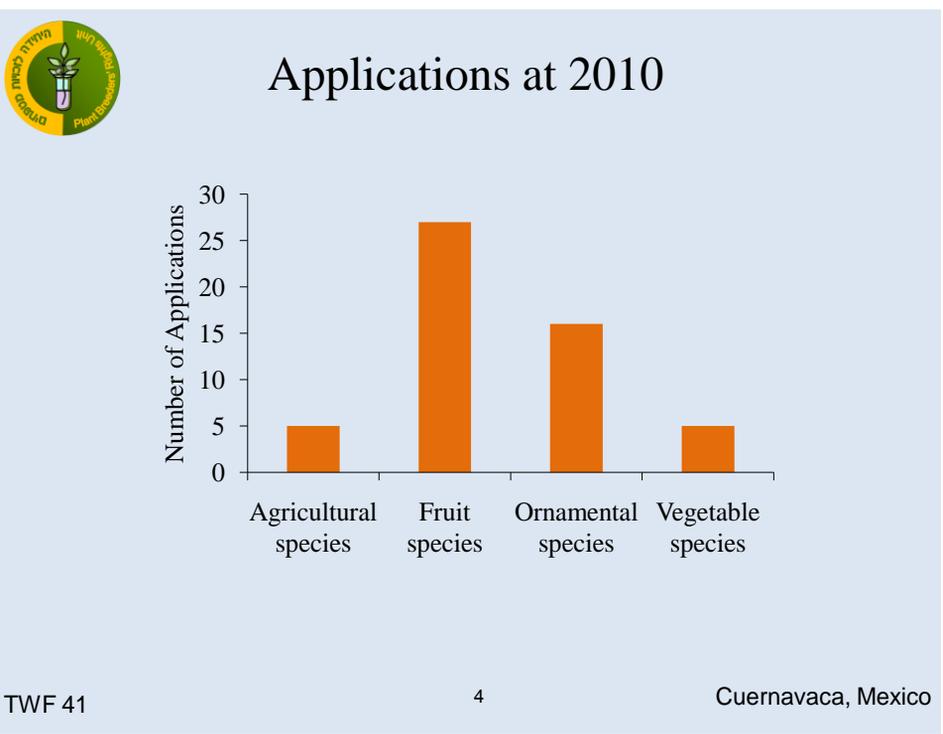
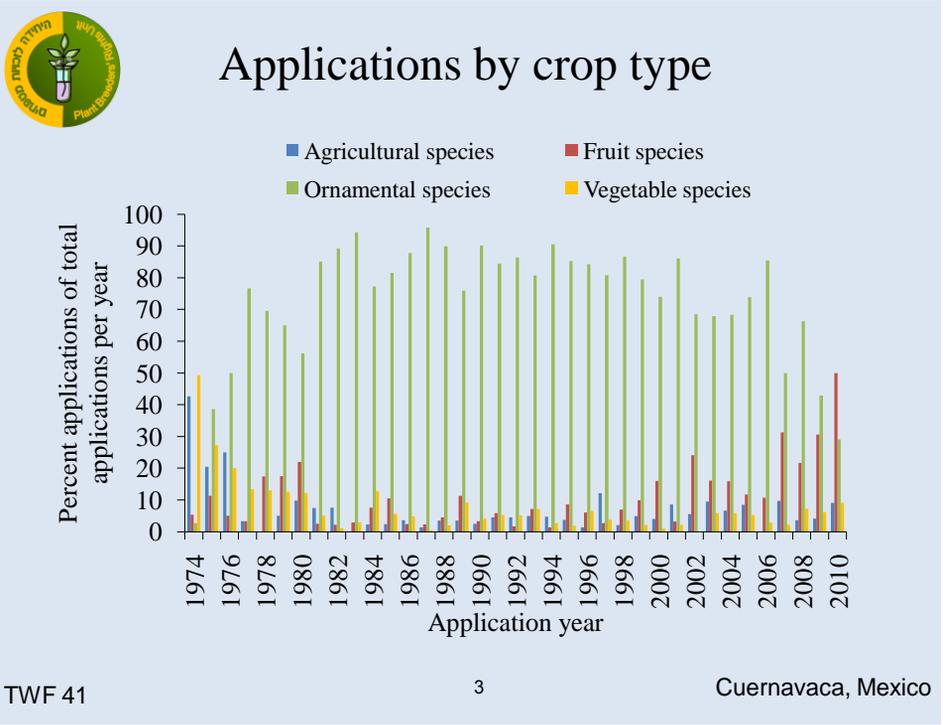
Application history



TWF 41

Cuernavaca, Mexico

COUNTRY REPORTS



COUNTRY REPORTS

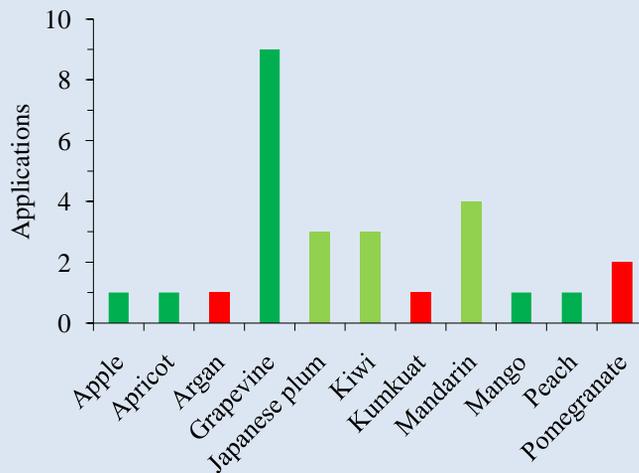


New species at 2010

- *Argania spinosa* L.
- *Chenopodium giganteum* D. Don
- *Actinotus helianthi* Labill.
- *Mandevilla* Lindl.
- *Penstemon* Mitch.



Fruit species at 2010



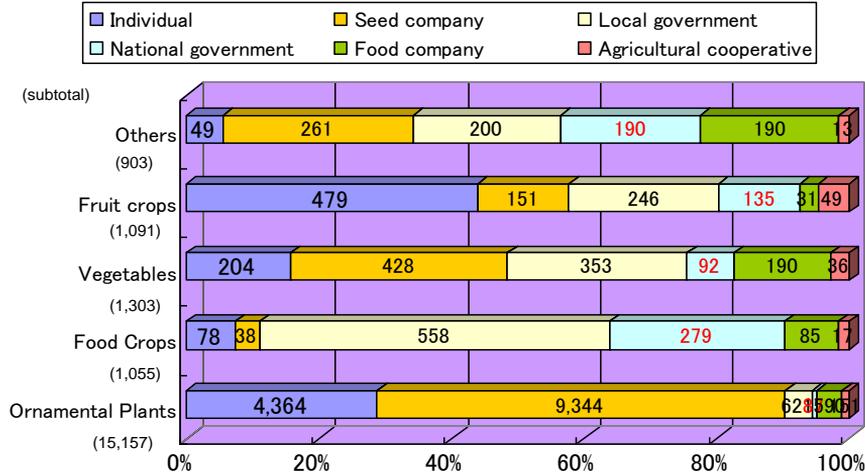
COUNTRY REPORTS

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Registration number of Japan by breeder



(~March 31,2010)

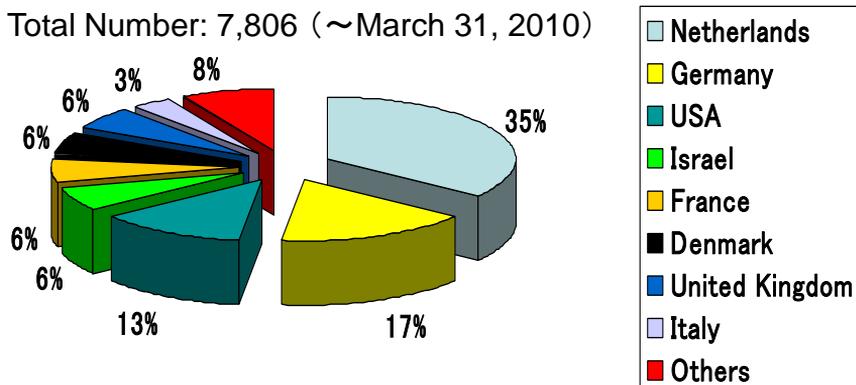


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Application bred in foreign countries



Total Number: 7,806 (~March 31, 2010)



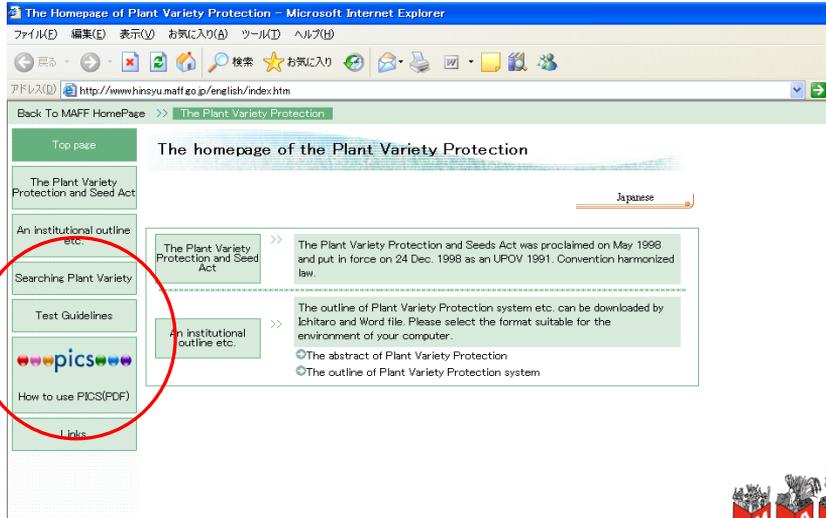
2005FY	2006FY	2007FY	2008FY	2009FY
1 Netherlands 141	1 Netherlands 156	1 Netherlands 209	1 Netherlands 121	1 Netherlands 105
2 USA 99	2 Germany 77	2 USA 100	2 Germany 85	2 Germany 80
3 Germany 44	3 Israel 58	3 Germany 98	3 USA 63	3 USA 30
Total number 463	474	578	463	322

COUNTRY REPORTS

TWF 41 , Cuernavaca, Mexico

Japanese PVP Office web-site
Top page in English

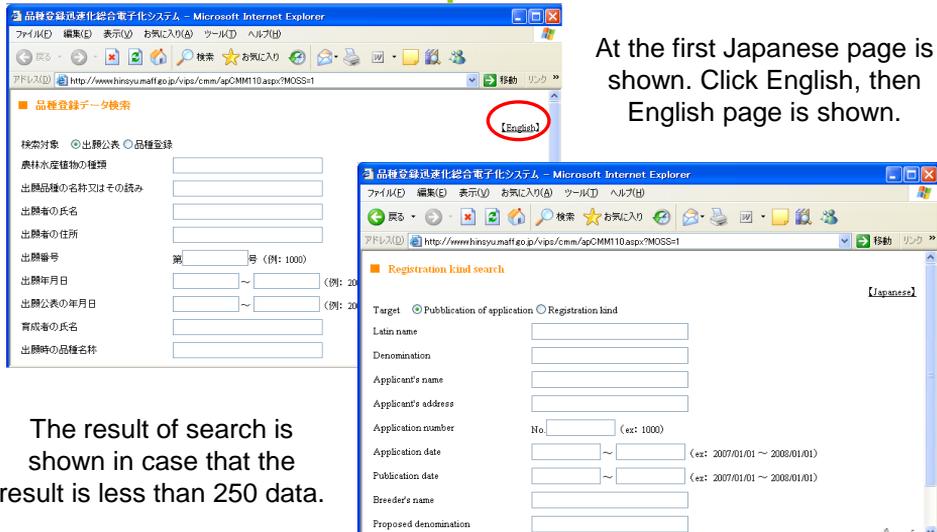
<http://www.hinsyu.maff.go.jp/english/index.htm>



TWF 41 , Cuernavaca, Mexico

Japanese PVP Office web-site
search for plant varieties

At the first Japanese page is shown. Click English, then English page is shown.



The result of search is shown in case that the result is less than 250 data.

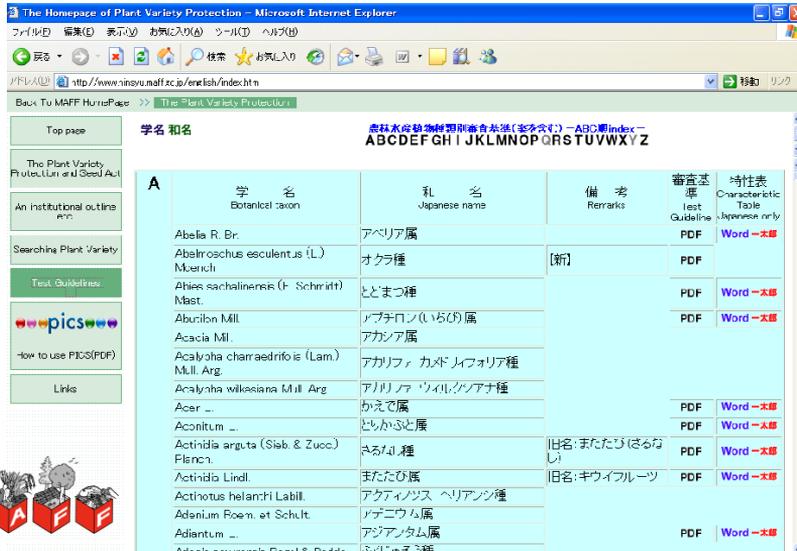


COUNTRY REPORTS

TWF 41 , Cuernavaca, Mexico

Japanese PVP Office web-site
Test guidelines

There are about 600 TGs. Some TGs are only in Japanese.



TWF 41 , Cuernavaca, Mexico

Japanese PVP Office web-site
search engine for plant varieties by flower colors

The data of PICS has been increasing.



How to use PICS is shown at the banner on the top page.



COUNTRY REPORTS
PLANT VARIETY PROTECTION IN MOROCCO

In Morocco, the Law 9/94 on plant variety protection was promulgated in 1994. This Law is in conformity with the 1991 Act of the UPOV convention.

For the implementation of this Law, two decrees were published in the Official Journal in March 2002 and seven ministerial decrees were published in the Official Journal on October 28, 2002.

Law 9/94 concerns different genera and species. Currently, 79 species can be protected in Morocco, namely :

Distribution by species :

Species	Applications	Protected varieties	Varieties under examination
Field crops	69	65	04
Grape vine	27	05	11
Fruit trees	92	40	48
Potato	57	44	05
Strawberry	19	11	09
Roses	03	02	00
Vegetables	20	05	13
Total	287	172	90

Distribution by origin :

Country	Applications	Protected varieties
Morocco	99	76
Netherlands	44	24
France	47	25
United States of America	33	11
Spain	27	17
South Africa	13	01
Iceland	12	11
Great Britian	04	04
Brazil	01	00
Cyprus	01	01
Hungary	01	01
Italy	04	01
Total	287	172

RECENT DEVELOPMENTS WITHIN UPOV

UPOV

RECENT DEVELOPMENTS IN UPOV

UPOV

OVERVIEW

- UPOV Membership
- UPOV people
- Information materials
- Seminar on DUS testing
- Test Guidelines
- Other developments
 - United Nations
 - Second World Seed Conference
 - UPOV Open Day

UPOV

MEMBERSHIP OF UPOV

68 Members
(67 States and the European Union)

<u>1991 Act</u>		
Slovakia	June 12, 2009	
<u>Laws examined</u>	<u>Council session</u>	<u>Advice</u>
Oman	October 22, 2009	positive
Guatemala	October 22, 2009	positive
<u>New Members</u>		
Oman	November 22, 2009	

UPOV

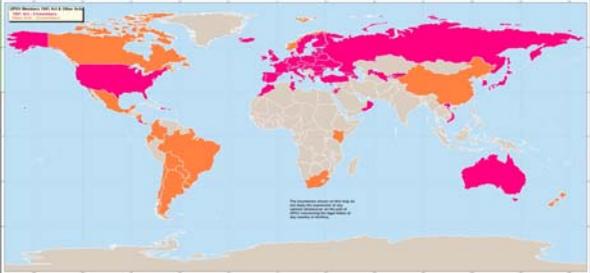
Members of UPOV (green) and initiating States and organizations (brown)



Initiated the Procedure
17 States
1 intergovernmental organization

UPOV

UPOV Membership Territories covered



UPOV

COUNCIL

ELECTIONS

for a term of three years ending in 2012

President of the Council

Mr. Keun-Jin Choi
(Republic of Korea)

Vice-President of the Council

Ms. Kitisri Sukhapinda
(United States of America)

RECENT DEVELOPMENTS WITHIN UPOV

 **TECHNICAL COMMITTEE**

proposals

President of the Technical Committee

Mr. Joël Guiard
(France)

Vice-President of the Technical Committee

Mr. Alejandro Barrientos-Priego
(Mexico)

 **COUNCIL**

APPOINTMENT
from December 1, 2010

Vice Secretary-General

Mr. Peter John Button

PROMOTION
from December 1, 2010

Director

Mr. Raimundo Lavignolle



 **VACANCY**

SENIOR TECHNICAL COUNSELLOR

(Grade P5)

 **INFORMATION MATERIALS**

 **COUNCIL**

INFORMATION MATERIALS ADOPTED:

UPOV/INF/12/2 (Revision)
Explanatory Notes on **Variety Denominations** under the UPOV Convention
*(Revised classes:
Class 202 Megathyrsus, Panicum, Setaria and Steinchisma
Class 211 Mushrooms)*

UPOV/INF/13/1
Guidance on **How to Become a Member of UPOV**

UPOV/INF/14/1
Guidance for Members of UPOV on **How to Ratify, or Accede to, the 1991 Act of the UPOV Convention**

 **COUNCIL**

INFORMATION MATERIALS ADOPTED (continued): :

Guidance for the preparation of laws based on the 1991 Act of the UPOV Convention (document UPOV/INF/6/1)

PART I: *EXAMPLE TEXT FOR ARTICLES*
PART II: *NOTES BASED ON INFORMATION MATERIALS*

(available in English, French, German, Spanish, Arabic, Chinese and Russian)

RECENT DEVELOPMENTS WITHIN UPOV

UPOV COUNCIL

INFORMATION MATERIALS ADOPTED (continued):

Explanatory Notes on:

UPOV/EXN/GEN/1	Genera and Species to be Protected
UPOV/EXN/NAT/1	National Treatment
UPOV/EXN/NOV/1	Novelty
UPOV/EXN/PRI/1	Right of Priority
UPOV/EXN/PRP/1	Provisional Protection
UPOV/EXN/EDV/1	Essentially Derived Varieties
UPOV/EXN/EXC/1	Exceptions to the Breeder's Right
UPOV/EXN/NUL/1	Nullity of the Breeder's Right
UPOV/EXN/CAN/1	Cancellation of the Breeder's Right
UPOV/EXN/ENF/1	Enforcement of Breeders' Rights

...under the 1991 Act of the UPOV Convention
(also incorporated in document INF/6/1)

UPOV Administrative and Legal Committee Advisory Group (CAJ-AG)

Explanatory Notes

(a) UPOV/EXN/BRD: Definition of Breeder
(b) UPOV/EXN/HRV: Harvested Material
(c) Essentially Derived Varieties (revision)

Matters referred by the CAJ to the CAJ-AG:

(a) objectives of the possible development of a document on the exhaustion of the breeder's right
(b) objectives of the possible development of a document on the notion of "own holdings"
(c) matters arising after the grant of a breeder's right

UPOV COUNCIL

TGP DOCUMENTS ADOPTED

TGP/12/1: Guidance on Certain Physiological Characteristics
TGP/13/1: Guidance for New Types and Species
TGP/0/2 (Revision):
List of TGP Documents and Latest Issue Dates

UPOV

TG/1/3 General Introduction

"Associated" TGP Documents

Ref.	Title
TG/00	List of TGP Documents and Latest Issue Dates
TGP/1	General Introduction With Explanations
TGP/2	List of Test Guidelines Adopted by UPOV
TGP/3	Varieties of Common Knowledge
TGP/4	Constitution and Maintenance of Variety Collections
TGP/5	Experience and Cooperation in DUS testing
TGP/6	Arrangements for DUS testing
TGP/7	Development of Test Guidelines
TGP/8	Trial Design and Techniques Used in the Examination of DUS
TGP/9	Examining Distinctness
TGP/10	Examining Uniformity
TGP/11	Examining Stability
TGP/12	Special Characteristics
TGP/13	Guidance for New Types and Species
TGP/14	Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents
TGP/15	New Types of Characteristics

for adoption (pointing to TGP/8, TGP/11, TGP/14)

for revision (pointing to TGP/7)

Standard wording (pointing to TGP/12)

UPOV INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

HOME | ABOUT UPOV | UPOV DOCUMENTS | PUBLICATIONS | NEWS & EVENTS

Meeting Calendar
Council Documents
Restricted area

SEMINAR ON DUS TESTING
Geneva, March 18 to 20, 2010

Aim:

To provide information and facilitate discussion on:

- arrangements for DUS testing; and
- guidance for DUS testing, including test guidelines, the management of variety collections and variety descriptions.

Target Audience:

- Officials responsible for organizing DUS testing
- Staff of plant variety protection offices and DUS testing organizations
- DUS examiners
- DUS data administrators
- Breeders

UPOV Seminar on DUS Testing

Session 1: Arrangements for DUS Testing
Session 2: Breeders' Perspective on DUS Testing
Session 3: Role of the Technical Committee and the Technical Working Parties
Session 4: DUS Training provided by members of the Union
Session 5: Guidance for DUS Testing
Session 6: Management of Variety Collections
Session 7: Developing Variety Descriptions and their Use for Distinctness and the Management of Variety Collections

(a) Transformation of Observations and Measurements into Notes for Distinctness and for Variety Descriptions
(b) Use of Variety Descriptions Provided by Breeders

RECENT DEVELOPMENTS WITHIN UPOV

Seminar on DUS Testing: TC Chairman conclusions

- "UPOV members have used a range of approaches for DUS testing, as envisaged within the UPOV Convention, in order to provide an efficient and effective system for breeders according to their circumstances
- "Cooperation is crucial for all UPOV members and will need to intensify in future to meet the expansion of the UPOV system. There is a need to:
 - continue to work on guidance documents (OP documents, Test Guidelines) and exchangeable software (COV, GAIA etc.) to promote harmonization,
 - enhance efficiency of cooperation, through:
 - maintaining standard forms, agreed file for DUS reports, etc.;
 - the use and further development of tools, such as the GENIE database;
 - increasing exchange of information between UPOV members on their newly acquired experience;
 - exchanging variety descriptions; and
 - coordinating resources offered by members of the Union (e.g. training, helpdesks, ad hoc expert advice).
- "The Technical Committee and Technical Working Parties are an important means of training and exchanging information in an expert forum, and additional benefits can be achieved through proprietary workshops and associated training events.
- "It is important to continue to explore methods to address the management of variety collections, e.g. the potential role for molecular techniques.
- "The organization of such seminars, from time-to-time, provides a valuable means of sharing broad overviews and new developments and also of identifying areas for possible future guidance (e.g. treatment of data for distasteful and desiccation, understanding of 'similar varieties', status of the variety description).
- "UPOV encourages broader organisations to contribute to UPOV's technical work and encourages a constructive dialogue on relevant issues at an early stage.
- "Participation by experts of potential future members of the Union in the Technical Committee and Technical Working Parties, as observers, was encouraged as a principal means of achieving harmonization with the UPOV system, and facilitation of future cooperation on becoming UPOV members."

Test Guidelines adopted by Technical Committee in 2010

New Test Guidelines:

Document	English	Drafter	TWP
TG/259/1	Agaricus Mushroom, Button Mushroom	QZ	TWV
TG/BUDDL	Buddleia, Butterfly-bush	FR	TWO
TG/FIG	Fig	ES	TWF
TG/GAURA	Gaura	GB	TWO
TG/GYPSO	Baby's Breath, Gyp, Gypsophila	IL/QZ	TWO
TG/264/1	Papaya, Papaw	MX	TWF
TG/260/1	Pearl Millet	BR	TWA
TG/258/1	Sweet Potato	KR	TWA/TWV

Test Guidelines adopted by Technical Committee in 2010

Document	English	Drafter	TWP
Revisions:			
TG/53/7	Peach	FR	TWF
TG/59/7	Lily	NL	TWO
TG/116/4	Black Salsify, Scorzonera	NL	TWV
TG/123/4	Banana	BR	TWF
TG/130/4	Asparagus	NL/DE	TWV
TG/133/4	Hydrangea	FR	TWO
Partial revisions:			
TG/11/8 Rev.	Rose		TWO
TG/176/4 Rev.	Osteospermum		TWO

Other Test Guidelines considered by Technical Committee in 2010

Status	Document No.	English	Drafter	TWP
Referred back to TWO	TG/VRIES	Vriesea	NL	TWO

Test Guidelines corrections notified to Technical Committee in 2010

Status	Document No.	English	TWP
Published	TG/26/5 Corr.2	Chrysanthemum	TWO
Published	TG/28/9 Corr.	Zonal Pelargonium, Ivy-Leaved Pelargonium	TWO

Test Guidelines

- **264 Test Guidelines** adopted
- **2,250 genera and species** for which UPOV members have practical DUS experience
- **>2,940 genera and species** with varieties examined for PBR

Note: **264 Test Guidelines cover 90% of PBR-related varieties in UPOV-ROM**

GENIE Database

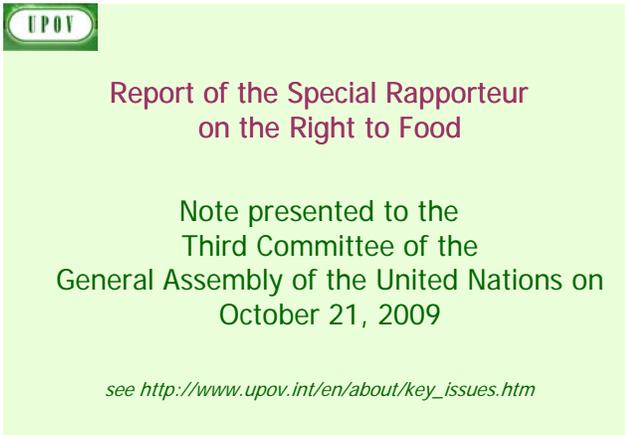
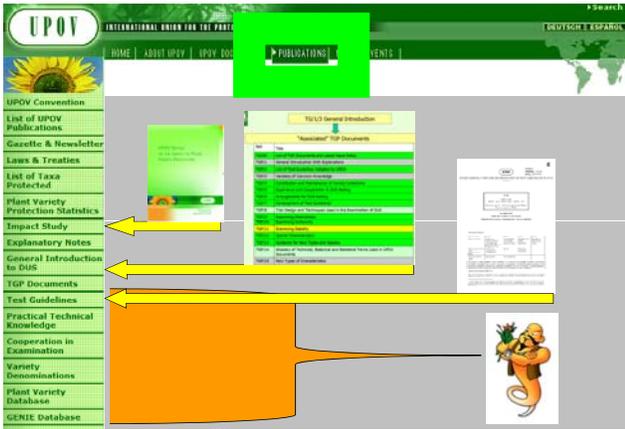
Variety denomination related information
Protection offered by UPOV members

DUS information

- UPOV Test Guidelines
- practical experience of UPOV (document TC/46/4)
- cooperation in DUS examination (document C/43/5)



RECENT DEVELOPMENTS WITHIN UPOV



ANNEX VI

COMMENTS OF MOROCCO CONCERNING THE NEW CHARACTERISTICS PROPOSED “FRUIT: NUMBER OF SEEDS (CONTROLLED MANUAL CROSSPOLLINATION) AND POLLEN VIABILITY IN THE UPOV TEST GUIDELINE FOR MANDARIN

Comment 1: Ovule fertility

In the UPOV test guideline to test the ovule fertility we can find only the character n° 99 “Fruit: number of seeds (open pollination)”. This character corresponds to the study of female fertility under open-pollination conditions.

The Spanish proposal on this character, namely the female fertility involves the introduction of a new character 98 bis, which is the study of female fertility by cross-pollination.

However:

1- It was shown that the study of female fertility in citrus is very effective under open pollination conditions than hand pollination (**Masahi et al., 1995**).

2- **Brown and Krezdorn. (1969)**, reported that standard pollination tests involving massive applications of pollen alone are not sufficient to delineate those varieties which are good pollinators and to distinguish the degree of female fertility.

Indeed, They do not take into account species or variety preference by the bees, the amount of pollen carried by bees, the number of visits bees make to citrus flowers and the amount of pollen produced by flowers of given varieties. These factors ignored in the new proposed character are taken into account in the character 99 (UPOV test guideline) which corresponds to the study of female fertility.

Comment 2: Pollen viability

In the original version (Ch4.2: Choice of characters, UPOV Guidelines for the mandarin), the character 25 "Anthers: pollen viable," is noted by two states of expression: "absent or present. To change this character by the addition of different expression levels of pollen viability, the Spanish proposal was based on the fact that the number of seed in the fruit depends on the pollen viability.

However:

1-In a study it was reported that The reduced seediness in the Orlando tangelos set by Minneola pollen cannot be attributed to low viability of the pollen because Minneola pollen on King orange flowers produced the highest degree e of seediness of all the combinations tested, with an average of 30 seeds in King fruit (**Philip. et al. 1961**).

2- **Masashi et al. (2006)** in a study designed to investigate the compatibility and incompatibility between the tangerine and the variety Ariake that pollen tube growth in styles

of Ariake x clementine and reciprocal cross combination, Clementine x Ariake was inhibited, although both accessions could produce viable pollen.

The number of seed in the fruits depends on compatibility of the pollen with the stigma of the female variety, and pollen viability rather than only the degree of pollen viability.

Conclusions

Based on these arguments, the ovule fertility can be estimated by open pollination rather than hand pollination and the new character proposed by *expert from Spain* would not be added in the UPOV

The number of seed in the fruits depends on pollen compatibility with the stigma of the female variety, and pollen viability rather than only the degree of pollen viability.

On the other hand we support the remarks made by Australian delegation concerning the conditions of experimentation regarding hand pollination. This supposes that in experimentation we should use source of pollen which in practice is not practicable.

References:

Brown H. D. and Krezdorn A. H. 1969. Hand and pollination tests and field evaluation of pollinators for citrus . FLORIDA STATE HORTICULTURAL SOCIETY.,

Philip C. Reece. Robert O. Register. 1961. Influence of pollinators on fruit set on Robinson and Osceola tangerine hybrids. 1961. Florida state horticultural society.

Massashi Y., Tatsuya K., Shigeto T. 2006. Self-and cross-incompatibility of various Citrus Accessions. J . japan. Soc. Hort. 75 (5), 372-378.

Massashi Y., Ryoji M., and Yoshio Y., 1995. Relationship between sterility and seedlessness in citrus. Japan. Soc. Hort. Sci 64 (1): 23-29.

[Annex VII follows]

TEST GUIDELINES FOR ADOPTION BY THE TECHNICAL COMMITTEE

2.2.6 STEP 6 Submission of Draft Test Guidelines by the Technical Working Party

Once the TWP has agreed to submit particular draft Test Guidelines to the Technical Committee, **the Office will prepare the necessary documents (i.e. the Leading Expert should NOT prepare a new draft TG)**

Where the amendments requested by the TWP require **further information** to be provided to the Office by the Leading Expert, this should be provided **within six weeks of the TWP session**, or according to a deadline agreed by the Chairperson of the TWP in conjunction with the Office. If specified by the TWP, this information must first be agreed by all interested experts. ...

TEST GUIDELINES FOR THE NEXT TWP SESSION

TG Drafters' Webpage (password required)



The screenshot shows the UPOV website interface. At the top, the UPOV logo and the text "INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS" are visible. Below this is a navigation menu with links for HOME, ABOUT UPOV, UPOV DOCUMENTS, PUBLICATIONS, and NEWS & EVENTS. The main content area is titled "TG WEBPAGE" and lists several links: IWA, IWE, TWO, IXX, and "Practical Guide for Drafters of Test Guidelines". A red arrow points to the "Practical Guide for Drafters of Test Guidelines" link. Below this are links for "Electronic TG Template" and "Adopted Test Guidelines in Word Format". At the bottom, there are links for TGP/7 Annex 4 (User Notes, Index, Collection of Approved Characteristics) and TGP/14 (SHAPES Extract).

UPOV
INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

HOME | ABOUT UPOV | UPOV DOCUMENTS | PUBLICATIONS | NEWS & EVENTS

"To provide a fair, precise and effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants for the benefit of society."

TG WEBPAGE

- IWA
- IWE
- TWO
- IXX
- [Practical Guide for Drafters of Test Guidelines](#)
- [Electronic TG Template](#)
- [Adopted Test Guidelines in Word Format](#)

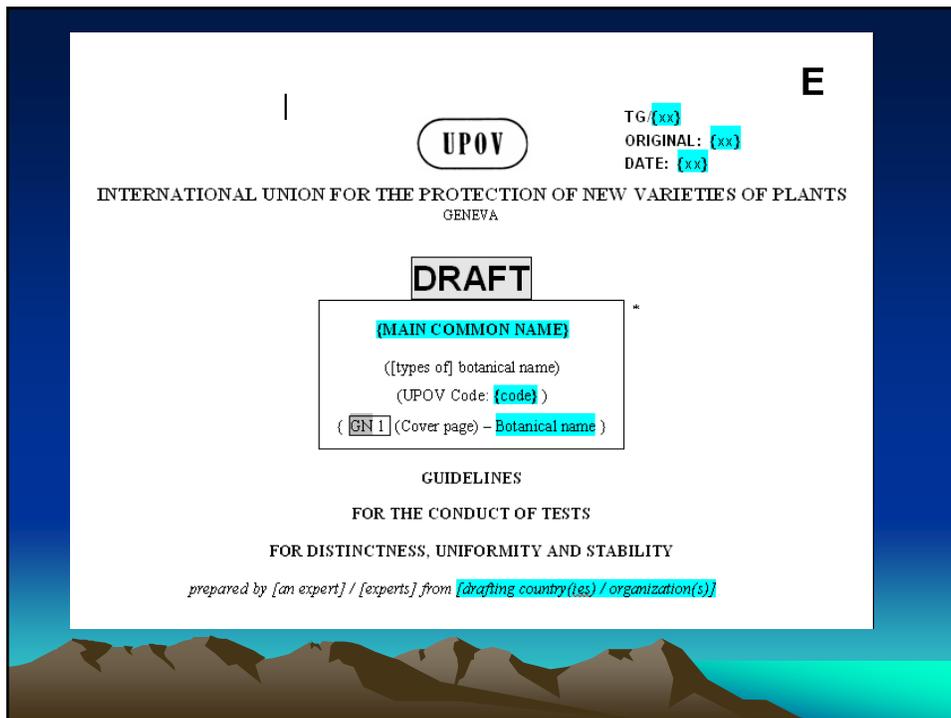
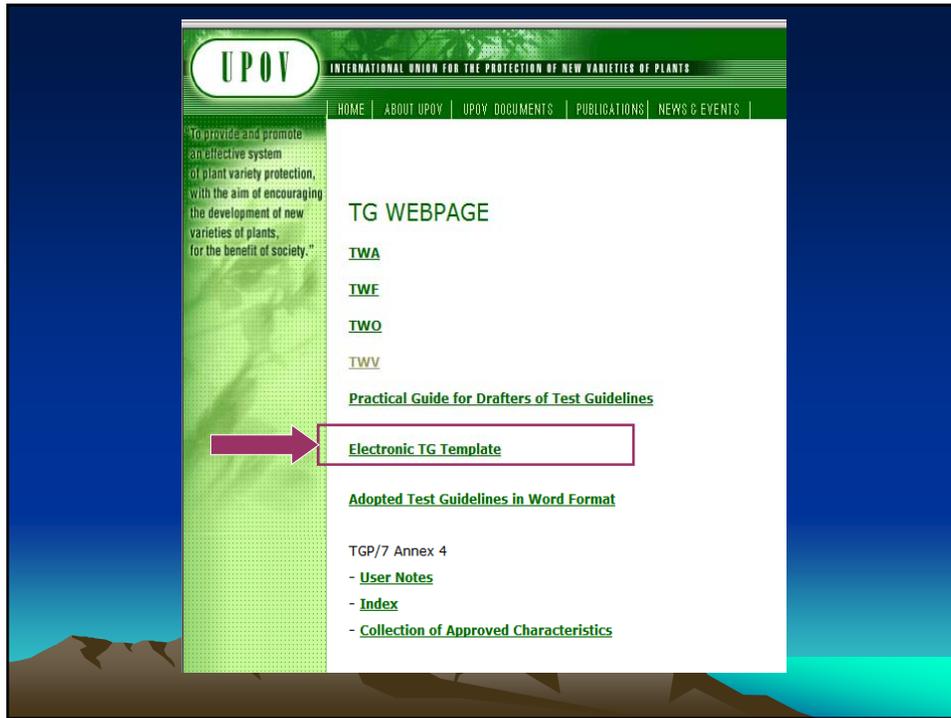
TGP/7 Annex 4

- User Notes
- Index
- Collection of Approved Characteristics

TGP/14

- SHAPES Extract

TWF/41/30 Rev.
Annex VII, page 3
GUIDANCE FOR DRAFTERS OF TEST GUIDELINES



TWF/41/30 Rev.
Annex VII, page 4
GUIDANCE FOR DRAFTERS OF TEST GUIDELINES

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of **(xxx)**.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

(**GN 7**) (Chapter 2.3) – quantity of plant material required)
(**ASW 1**) (Chapter 2.3) – seed quality requirements)

Green text in this document indicates optional Additional Standard Wording (ASW), which should be deleted where not appropriate.

(a) Test Guidelines which only apply to seed-propagated varieties

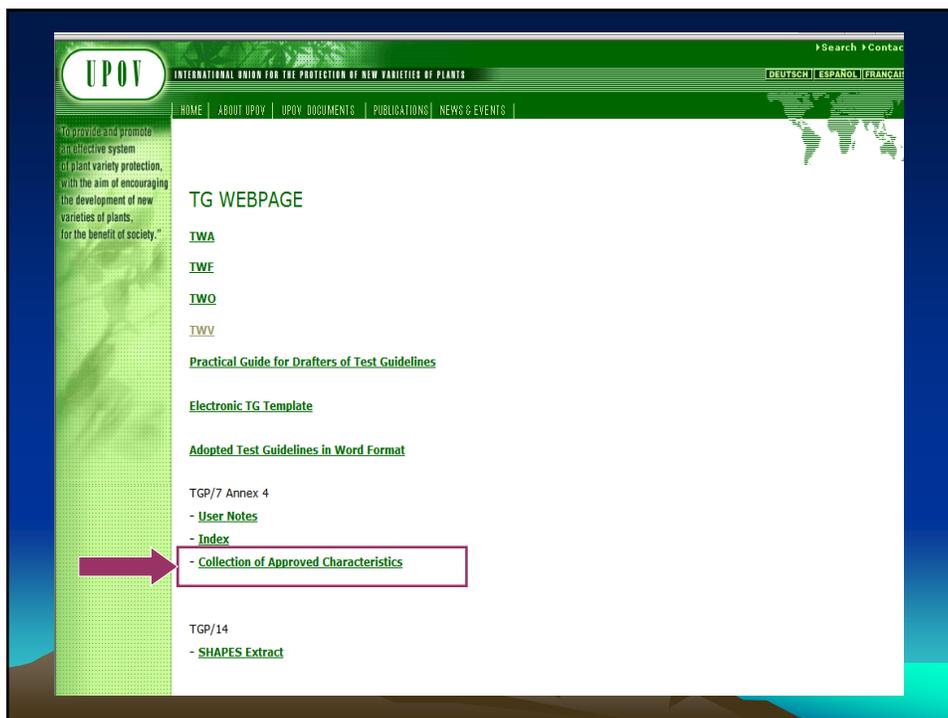
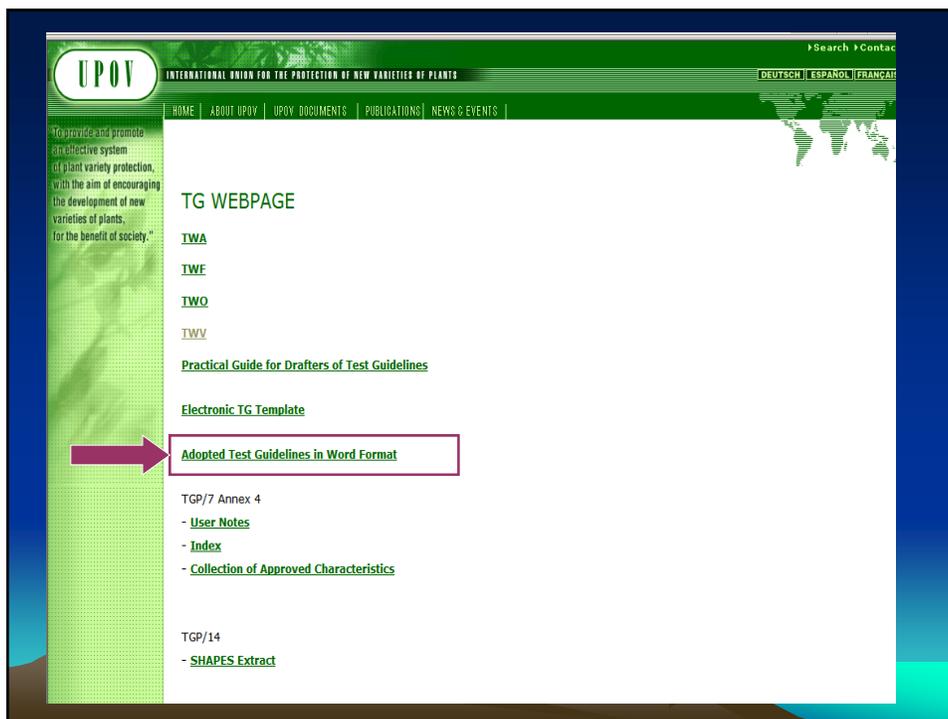
Alternative 1: “The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant.”

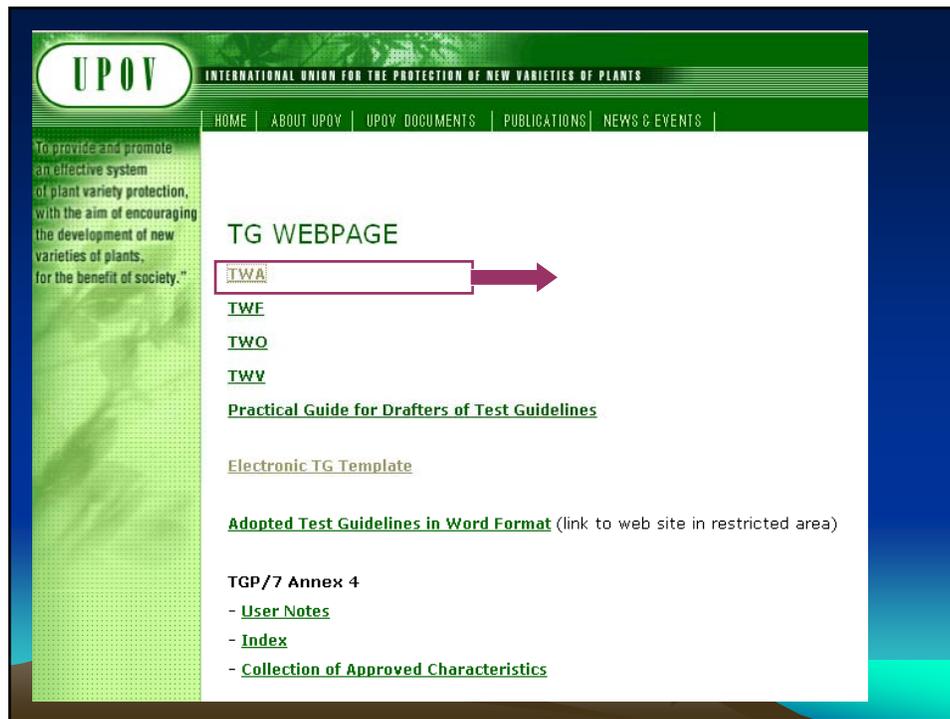
Alternative 2: “The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority.”

(b) Test Guidelines which apply to seed-propagated as well as other types of varieties

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
1. MG   QL (a)				EXAMPLE A	
				[in alphabetical order]	
2. I4  MS/ VG QN (b) (c)				EXAMPLE B (WHERE GROWTH STAGES PROVIDED IN TG)	
				[in alphabetical order]	
English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
1.					

TWF/41/30 Rev.
Annex VII, page 5
GUIDANCE FOR DRAFTERS OF TEST GUIDELINES





UPOV INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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To provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society."

TG WEBPAGE

[TWA](#) →

[TWF](#)

[TWO](#)

[TWP](#)

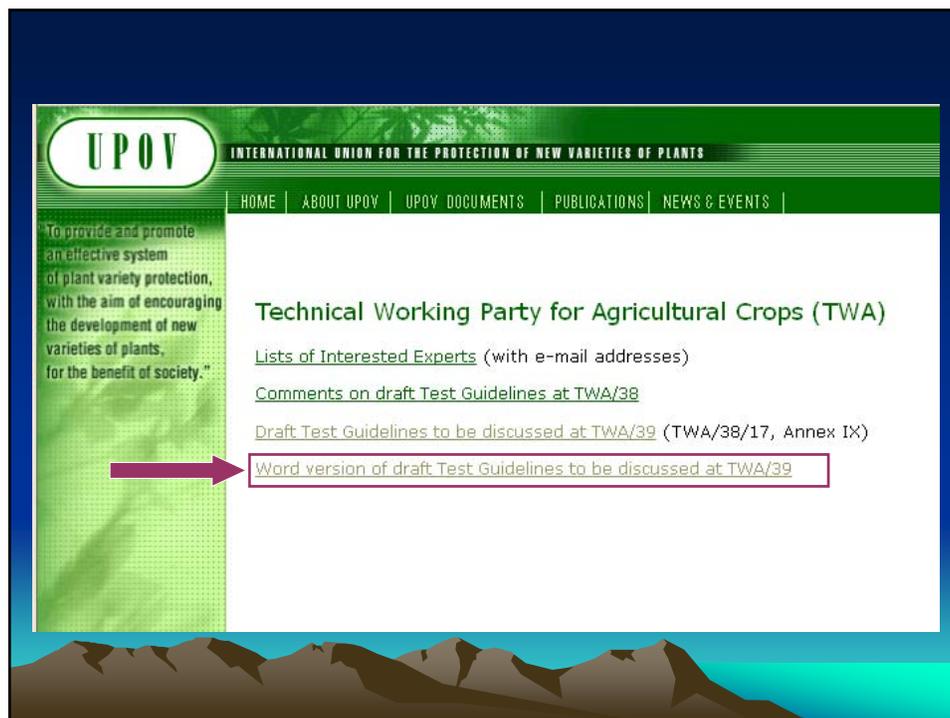
[Practical Guide for Drafters of Test Guidelines](#)

[Electronic TG Template](#)

[Adopted Test Guidelines in Word Format](#) (link to web site in restricted area)

TGP/7 Annex 4

- [User Notes](#)
- [Index](#)
- [Collection of Approved Characteristics](#)



UPOV INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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To provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society."

Technical Working Party for Agricultural Crops (TWA)

[Lists of Interested Experts](#) (with e-mail addresses)

[Comments on draft Test Guidelines at TWA/38](#)

[Draft Test Guidelines to be discussed at TWA/39](#) (TWA/38/17, Annex IX)

→ [Word version of draft Test Guidelines to be discussed at TWA/39](#)

Technical Working Party for Agricultural Crops (TWA)

Word version of draft Test Guidelines to be discussed at TWA/39:

TG/57/7(proj.4)	Flax, Linseed (Revision) (<i>Linum usitatissimum</i> L.)
TG/120/4(proj.2)	Durum wheat (Revision) (<i>Triticum durum</i> Desf.)
TG/CAN SAT(proj.3)	Hemp (<i>Cannabis sativa</i> L.)
TG/FAGOP(proj.4)	Buckwheat (<i>Fagopyrum esculentum</i> Moench)
TG/SETARIA(proj.4)	Foxtail millet (<i>Setaria italica</i> (L.) P. Beauv.)
TG/SESAME(proj.5)	Sesame
TG/UROCH(proj.4)	Urochloa (<i>Brachiaria</i>)

THANK YOU

ANNEX VIII

LIST OF LEADING EXPERTS

**DRAFT TEST GUIDELINES TO BE SUBMITTED
TO THE TECHNICAL COMMITTEE IN 2011**

All requested information to be submitted to the Office of the Union

before November 12, 2010

Species	Basic Document	Leading expert(s)	Interested experts (States/Organizations) ¹
*Acerola (<i>Malpighia emarginata</i> DC)	TG/ACERO (proj.2)	Mr. Yamaguchi (JP)	BR, MX, CIOPORA, Office
*Almond (<i>Prunus amygdalus</i> Batsch) (Revision)	TG/56/4 (proj.2)	Mrs. Petzer (ZA)	CN, ES, FR, HU, QZ, RO, CIOPORA, Office
Cacao (<i>Theobroma cacao</i> L.)	TG/CACAO (proj.3)	Mr. Barrientos-Priego (MX)	BR, FR, CIOPORA, ISF, Office
*Dragon-fruit (<i>Hylocereus undatus</i> (Haw.) Britton et Rose)	TG/DRAGON (proj.4)	Mr. Barrientos-Priego (MX)	IL, JP, KR, CIOPORA, Office
*Gooseberry (<i>Ribes uva-crispa</i> L.) (Revision)	TG/51/7 (proj.2)	Mr. Schulte (DE)	HU, JP, NL, PL, PT, QZ, RO, SK, CIOPORA, Office
*Japanese plum (Revision)	TG/84/4 (proj.3)	Mr. Semon (QZ)	AU, BR, CA, CN, ES, FR, IT, JP, KR, NZ, PL, ZA, CIOPORA, Office
*Mandarin (Citrus; Grp 1) (Partial Revision)	TG/201/1 and TWF/41/28	Mr. Chomé Fuster (ES)	AU, BR, CN, JP, KR, MX, NZ, QZ, ZA, CIOPORA, Office
*Olive (<i>Olea europaea</i> L.) (Revision)	TG/99/4 (proj.2)	Mr. Venter (ZA)	AU, BR, ES, FR, PT, QZ, CIOPORA, Office
*Red and White Currant (<i>Ribes sylvestre</i> (Lam.) Mert. & W.O.J. Koch) (Revision)	TG/52/6 (proj.2)	Mr. Schulte (DE)	HU, NL, PL, PT, QZ, RO, SK, ZA, CIOPORA, Office

¹ For name of experts, see list of participants (Annex I).

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWF/42

(* indicates possible final draft Test Guidelines)

New draft to be submitted to the Office of the Union

before September 30, 2011

(Guideline date for Subgroup draft to be circulated by Leading Expert: August 5, 2011

Guideline date for comments to Leading Expert by Subgroup: September 2, 2011)

Species	Basic Document(s)	Leading expert(s)	Interested experts (States/Organizations) ¹
<i>Acca sellowiana</i> (Berg) Burret	New	Mr. Barnaby (NZ)	AZ, BR, Office
* <i>Actinidia</i> Lindl. (Kiwifruit) (Revision)	TG/98/7 (proj.2)	Mr. Barnaby (NZ)	AU, BR, CN, IL, IT, JP, KR, QZ, ZA, CIOPORA, Office
Apple rootstocks (<i>Malus</i> Mill.)(Revision)	TG/163/3	Mr. Venter (ZA)	CN, DE, CIOPORA, JP, KR, FR, QZ, BR, AU, NZ,
<i>Fortunella</i> Swingle	New	Mr. Yamaguchi (JP)	AR, ES, IL, KR, RU, Office
<i>Litchi</i> Sonn.	New	Ms. Lu Xin (CN)	IL, ZA, Office
<i>Lonicera caerulea</i> L. var. <i>kamtschatica</i> Sevast (Blue Honeyberry)	TG/LONIC (proj.1)	Mr. Schulte (DE)	CA, PL, QZ, SK, CIOPORA, Office
*Papaya (<i>Carica papaya</i> L.) (Revision)	TG/264/1	Mr. Barrientos-Priego (MX)	BR, IL, JP, ZA, CIOPORA, Office
*Pecan nut	TG/PECAN (proj.7)	Mr. Labarta (AR) / Mr. Barrientos-Priego (MX)	BR, IL, KR, ZA, Bioversity, CIOPORA, Office
*Pineapple (<i>Ananas comosus</i>)	TG/PINEAP (proj.6)	Mr. Brand (FR)	AU, BR, ES, JP, KE, MX, PT, QZ, ZA, CIOPORA, Bioversity, Office
Pomegranate (<i>Punica granatum</i> L.)	TG/PGRAN (proj.1)	Mr. Chomé Fuster (ES)	IL, KR, MX, QZ, ZA, Office
*Strawberry (Partial revision for Chapter 8.1 (d))	TG/22/10	Mr. Schulte (DE)	AU, BR, CA, CL, CN, ES, FR, HU, IL, JP, KR, MX, NL, NZ, PL, PT, QZ, SK, ZA, CIOPORA, Office
<i>Vanilla</i> Mill.	New	Mr. Barrientos-Priego (MX)	FR, Office

[End of Annex VIII and of document]