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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR VEGETABLES

Forty-Second Session
Cracow, Poland, June 23 to 27, 2008

REPORT

adopted by the Technical Working Party for Vegetables

Opening of the Session

1. The Technical Working Party for Vegetables (TWV) held its forty-second session in Cracow, Poland, from June 23 to 27, 2008. The list of participants is reproduced in Annex I to this report.

2. The TWV was welcomed by Mr. Edward S. Gacek, Director General, Research Centre for Cultivar Testing (COBORU), who made a presentation on COBORU and agriculture in Poland. A copy of that presentation is provided as Annex II to this document.

3. The session was opened by Mr. Niall Green (United Kingdom), Chairman of the TWV, who welcomed the participants and, in particular, new participants to the TWV.

Adoption of the Agenda

4. The TWV adopted the agenda as reproduced in document TWV/42/1 Rev.

Short Reports on Developments in Plant Variety Protection

(a) Reports from members and observers

5. An expert from the Netherlands reported that since January 1, 2008, Naktuinbouw had taken over the administrative assistance for the Board of Plant Varieties which meant that all staff (8 people) had moved from the Ministry to Naktuinbouw. In 2007, the Netherlands received 809 applications for vegetables: 350 of those were for National PBR as well as for National Listing. That was due to the new Seed Law. He reported that Naktuinbouw was facing a growing number of applications that contained patented elements. Those presented specific issues that possibly needed to be discussed at some point in the TWV. In the Netherlands, Naktuinbouw sometimes used DNA techniques in order to confirm a rejection on lack of distinctness. The Netherlands was involved in two PBR related projects: one with China and one with Indonesia. Colleagues from those countries were being trained in DUS testing. Work was still on-going on improved methodology on DUS tests, for example, a project on the use of image analysis and the development of more calibration books. Reconstruction work was progressing with the construction of the new Naktuinbouw glasshouses, in anticipation of the transfer of all ornamental trials from Wageningen to Roelofarendsveen. The expert reported that he had CD-Roms available containing descriptions of all varieties that has passed DUS in 2006. The 2007 version was being prepared.

6. An expert from the Czech Republic reported that the number of applications for National Listing and Plant Breeders' Rights had been relatively stable during the previous five years. Each year they received a total of about 500 applications for National Listing and 70 to 90 applications for Plant Breeders' Rights, but the percentage of vegetable applications was very low: in 2007, 54 vegetable varieties were applied for National Listing and 3 for PBR. A dramatic decrease in the total number of varieties in the Czech National Listing was noted – in 2007, 1,438 varieties were deleted from the National Listing due to the 10-year expiration period. The fees for DUS and VCU tests had been revised. The new fees would be introduced at the end of 2008 at the latest. The new amendment of the Czech Act No 408/2000 Coll., on the Protection of Plant Variety Rights had been adopted. It would be published in the December 2008 UPOV Gazette and Newsletter. The expert reported that, in 2008, the Central Institute for Supervising and Testing in Agriculture (UKZUZ) had 2 priorities: to be successful in the European Union presidency (13 people were preparing for the work in the technical working group); and to establish a good management system and achieve accreditation according to ISO 9001.

7. An expert from Hungary reported that the Central Agricultural Office of Hungary had been established in 2006 among the other agricultural administrative institutions as a legal successor of the Institute for National Agricultural Quality Control. The number of applications for registration had slowly increased during the previous two years. In 2008, there had been 1,054 applications together with varieties registration renewals for: 741 agricultural crop varieties, 146 fruit and grape varieties and 167 vegetable varieties; mainly pepper, water melon, sweet corn , squash and bean.

8. An expert from South Africa reported that plant variety protection in South Africa was administered by the National Department of Agriculture under the Plant Breeder's Right Act No. 15 of 1976. He explained that they had three offices, which were divided into three stations. The first station evaluated ornamentals, agricultural crops and vegetables, and was based at the Pretoria Evaluation Centre. Subtropical and deciduous fruits were evaluated in Cape Province and other subtropical and citrus fruits were evaluated in the lowveld in Nelspruit. He reported

that knowledge about the importance of plant variety protection was increasing in South Africa. The majority of applications had been filed for hybrid maize (single cross and three-way cross varieties). Recently there had been an increase in tomato applications for protection. Applications were also increasing for plant variety protection for genetically modified crops, i.e. soybean, maize. 128 applications for plant variety protection and for variety listing for vegetables had been received in 2007. 18 applications for plant breeders' rights and 35 applications for variety listing had been approved. Most of the applications received for vegetables came from European countries. In the case of some crops, such as maize and tomato, many similar varieties had been filed making the establishment of distinctness difficult. The use of molecular techniques would be ideal in that situation. The expert added that South Africa was hosting the thirty-seventh session of the Technical Working Party for Agricultural Crops (TWA) which would take place in Nelspruit from July 14 to 18, 2008.

9. An expert from Ukraine reported that, having acceded to the 1991 Act of the UPOV Convention, Ukraine now offered protection for new varieties of vegetable crops of all species. The National List included 62 species. He reported that new varieties of vegetable plants underwent a DUS test either at examination stations of the Ukrainian Institute for Plant Variety Examination (20 species) or at applicants' stations. By June 20, 2008, 267 varieties representing 37 species had been protected: 158 had been bred by Ukraine breeders, and 109 resulted from foreign breeding. Ukraine followed 42 international test guidelines for vegetable plants and had developed 15 national test guidelines. New plant variety protection was provided with Test Guidelines for 90%. He reported that a positive amendment in the system of protection of new plant varieties was the submission of a Technical Questionnaire as a constituent of documents in the application for a variety.

10. An expert from Romania reported that there had been no major changes in Romania. Approximately 236 applications for plant variety protection had been filed, of which 53 were for vegetable varieties. The Romanian State Office for Inventions and Trademarks had granted 157 titles, 25 of which were for vegetable varieties. Plant breeders' rights had been granted for the following vegetables: pea, bean, pepper, carrot, tomato and cucumber. The legislation on Plant Breeders' Rights, Law no.255/1998, amended in 2006, was in conformity with the 1991 Act of the UPOV Convention and EU Regulation 2100/1994. Regarding DUS tests, in 2008, the State Institute for Variety Testing and Registration of Romania tested 510 varieties, of which 83 were for vegetables.

11. The expert from Moldova reported that legal protection of plant varieties in that country was carried out in accordance with the Law on the Protection of Plant Varieties N.915-XIII of July 11, 1996, amended and completed by the Law N.39 of February 02/2008. The expert explained that in accordance with that Law, variety patents were granted by the Agency on Intellectual Property which was responsible for the examination of the application, the examination of the denomination, the publishing of the filing date of the application granting the plant breeder's right and the maintenance of the Register of Applications. The State Commission for crop testing of plant varieties was responsible for the establishment and VCU testing and the elaboration of the official description of plant varieties. In June 2007, the Government of Moldova extended the list of plant genera and species eligible for plant variety protection from 24 to all genera and species. The expert reported that, in November 2008, Moldova would celebrate the tenth anniversary of the introduction of plant breeders' rights in Moldova. Since 1998, over 230 applications had been received and 29 plant breeders' rights had been granted.

12. An expert from the Republic of Korea reported on the current situation of plant variety protection in that country. In November 2007, the National Seed Management Office (NSMO) had been renamed the Korea Seed & Variety Service (KSVS) for providing the best service of plant variety protection (PVP) and seed business. In February 2008, the new Government changed the name of the Ministry of Agriculture and Forestry (MAF) to the Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) as a step in the restructuring of the administration. In March 2008, the list of genera and species eligible for plant variety protection was increased by 34 plant genera and species to 223. The number of applications for PVP had reached 3,663: 2,219 of those having been registered as of April 2008. They were divided as follows: ornamentals 55%, vegetables 18%, cereals 17%, fruits 5% and other 5%. For vegetables, the highest number was for hot pepper (20%), Chinese cabbage (15%), radish (13%), water melon (11%) and lettuce (9%), in order of numbers of applications. The expert reported that, at the beginning of 2008, the system had changed in order to unify the investigating database and documents and testing of the applied variety. The unified system of PVP was to be developed to link up with the computerized system. On May 26, 2008, KSVS acquired ISO-9001 certification for the service of PVP application and registration. In 2007, the fees for PVP application and registration of seed industry law were revised and, in 2008, the part concerning infringement of PVPR was added. In addition, KSVS had launched the first KOICA/PVP training course in 2007 for countries where PVP legislation was being developed or had recently been passed. The second KOICA/PVP training course was in progress and would close on July 12, 2008. Seventeen people from 13 countries were participating. The course would allow for the transfer of the accumulated expertise and know-how in the implementation of the PVP system by the Republic of Korea. In 2007, the Technical Working Party for Fruit Crops (TWF) had been held in Jeju, Republic of Korea. The KSVS was looking forward to welcoming colleagues to the twenty-sixth session of the Technical Working Party on Automation and Computer Programs (TWC) to be held from September 2 to 5, 2008, in Jeju.

13. Another expert from the Republic of Korea reported that, according to the Seed and Industrial Act, the Korea Forest Service (KFS) was responsible for PVP in the forestry sector which included ornamental trees, plant flowers and mushrooms. For that purpose, in 2008, the Forest Genetic Resources Center (FGRC) had been re-organized in the KFS. According to the Seed and Industrial Act 11, 15 forest species including chestnuts and mushrooms were entitled protection by the Ordinance of the Ministry of Agriculture and Forestry. Up to the present, 7 applications had been made for chestnuts and mushrooms and they were being tested for DUS. He further reported that the KFS was preparing test guidelines for many forest species which included, for example, wild allium (*Allium victorialis var. platyphyllum)* and mushrooms (*Sparassis crispa*).

14. The expert from Mexico reported that up to May 2008 a total of 919 applications had been received for plant breeders' rights, of which 396 were for agricultural crops, 284 for ornamental crops, 173 for fruit crops, 99 for vegetable crops and 3 for other crops. He explained that 30% of the applications were by national breeders. 408 applications had been granted so far.

15. The expert from Slovakia reported that the legislation on plant breeders' rights, Law No. 22/1996, which amended the previous Law No. 132/1989, was in conformity with the 1991 Act of the UPOV Convention. Since 1990, 1,145 applications for plant breeders' rights had been filed and approximately 450 rights had been granted. In 2007, the Ministry of Agriculture received 20 applications for plant breeders' rights and granted 43 rights. Forty-nine applications were cancelled. 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 there had been a

reduction in the number of applications for vegetables. Plant breeders' rights had been granted for garlic, onion, French bean, pea, cabbage, sugar maize, poppy, melon, pepper, parsley, leek, tomato, radish, lettuce, cucumber, celery. In 2007, 116 varieties were registered and 224 applications were made.

16. The expert from Bulgaria reported that the Executive Agency for Variety Testing, Field Inspection and Seed Control was the official body in Bulgaria for variety testing for plant breeders' rights and national listing. He explained that activities related to variety testing of vegetables had slightly increased in 2007. During that period, 47 applications for PBR had been filed: 25 for agricultural crops, 16 for vegetables and 6 for fruit varieties. For national listing, 110 varieties had been registered in 2007, of which 23 were for vegetable varieties. For inscription into the National List, some vegetable varieties from neighboring countries, Greece, Serbia and Turkey, had been tested. The main crops with breeding activities were cucumber, melon, pepper and tomato.

17. Experts from China reported from the Ministry of Agriculture (MOA) that the new Implementing Rules for Regulations on the Protection of New Varieties of Plants (Agriculture part) had been promulgated by that Ministry on September 19, 2007, and entered into force on January 1, 2008. In comparison to the old version, some important modifications had been made: (1). The rule of novelty had been changed: the expert informed the TWV that novelty had been shortened for one year (previously two years) from the date of publication of the list of protected genera and species of plants, and the propagating material of candidate variety had not been for sale with the consent of variety holder for more than 4 years within the territory of China. Furthermore, it was reported that, concerning the rule of novelty, the behavior of sale was explained in more detail than the old one, being more exercisable; (2). Fees for plant variety protection application had been greatly reduced. Fees for an application were about $3,000 in total, which was only 47% of the fees in the past. The expert further reported that the seventh batch list of protected genera and species of plants had been publicized on April 21, 2008, and was implemented on June 1, 2008. The total number of protected genera and species of plants had been increased to 74. The expert reported that new application forms were now used in accordance with the new implementing rules. Forms of the old version were no longer accepted. As of May 1, 2008, all applicants for PVP rights should fill out the new forms and submit electric documents at the same time. The expert informed the TWV that the number of applications and granted rights had continued to increase. 4,998 applications in agricultural plants had been received by the PVP office from 1999 to the end of May 2008. Among those applications, 213 were from foreign breeders. Altogether 1,638 rights had been granted. For vegetable plants, 200 applications had been received and 61 varieties had been granted plant breeders' rights. A two-year Sino-Dutch project called "DUS in China" supported by EVD, the Government of the Netherlands and DCST, MOA, China had started on January 1, 2007. 24 people engaged in PVP were sent to Naktuinbouw for DUS training in 2007 and, in 2008, 45 people would be trained by 6 experts from Naktuinbouw in 3 groups: one for potato, one for ornamentals and one for vegetables.

18. An expert from Japan reported that the policy of the Ministry of Agriculture, Forestry and Fisheries (MAFF) was that the agricultural industry would grow and develop by the positive use of intellectual property. Plant breeders' rights had been playing a main role of this policy. The expert explained that the Ministry had strengthened plant variety protection and carried out international cooperation in PVP. The Ministry would now reorganize the Plant Variety Protection & Seed Division and establish a new office, the Intellectual Property Division, in August 2008. The number of examination staff would be increased, bringing the total staff to 33. In the 2007 fiscal year, MAFF had received 1,533 applications. The number of applications

for vegetables was 80, which was 5% of the total number of applications. There were 14 applications for tomato and 14 for strawberry and 8 applications for pepper. Most of the applications were for ornamental crops, 1,257 in total (82% of the total applications), 88 applications were for agricultural crops (6%) and 47 applications were for fruit (3%).

19. The expert from Brazil reported that the PVP Office in that country had received 219 applications in 2007, 45% of which were for agricultural crops, 38% for ornamentals and 5% were for vegetables. In 2008 to date, Brazil had received 67 applications: 31% for agricultural crops, 36% for ornamentals and 16% for vegetables. He explained that, at the end of 2007, the PVP Office had launched an Electronic Application System, the objective of which was to make it easier to file an application and to follow it up. Applicants would be able to have a real time status of the application and would receive by e-mail the procedures made by the Office. He reported that a new Law proposal on plant breeders' rights, in conformity with the 1991 Act of the UPOV Convention, had been drafted by the Office and would be sent to the President who would present it to Congress. He further informed the TWV of the completion of facilities to store DNA from protected varieties and varieties of common knowledge.

20. An expert from Italy reported that, in 2007, the Ministry of Agriculture (MIPAF) had received approximately 150 applications for variety registration to the National Catalogue of vegetable species. Most varieties were tomatoes (50%), pepper, melon and lettuce. Regarding legislation, new procedures for listing varieties would be released. National protocols would be updated and amended with regard to CPVO guidelines and revised fees would be adopted.

21. The expert from Spain reported that the number of vegetable applications in that country had decreased slightly in 2007: 94 applications had been received for the National List and six for PBR.

22. The expert from Germany reported that the number of applications had remained low but stable. She reported that Ms. Heide Heine from the Bundessortenamt had retired and Mr. Klaus Schneider had replaced her. In all matters concerning UPOV and international affairs, the expert herself, Ms. Swenja Tams, would assist Mr. Schneider.

23. The expert from the European Community reported that, in 2007, the Community Plant Variety Office of the European Community (CPVO) had received 2,977 applications for Community plant variety rights (CPVR), an increase of 9% from the previous year, and had granted over 2,600 titles of protection. The "strategic discussion" had been finalized, with quality requirements forming the guiding principle for future DUS testing in the European Union (EU), so as to enable the "one key, several doors" principle to be implemented, whereby DUS test reports produced by any authority in the EU would be accepted for listing or protection purposes throughout the European Community; in order to put the conclusions of the strategic discussion into practice, an independent technical audit unit of the CPVO would commence operations in the autumn of 2008. The CPVO continued its close collaboration with the UPOV Office in relation to variety denomination issues, so that currently the CPVO compiled all the data on variety denominations from countries in Europe, whilst the UPOV Office did this for the rest of the world. Throughout 2007 and into 2008 the Office took part in the Multibenificiary program on the participation of Turkey, Croatia and Former Yugoslavian Republic of Macedonia in the CPVR system with a view to their possible accession to the EU sometime in the future. Other notable forms of international cooperation were the signing of a Memorandum of Understanding with Japan for the mutual recognition of technical reports in certain ornamental species, and the appointment of SNICS (Mexico) as the CPVO's official examination office for avocado varieties. The expert reported that the CPVO had won the first

case of an appeal on CPVR going to the European Court of First Instance, for a grant of protection granted to the clementine variety 'Nadorcott'. Applications in the vegetable sector in 2007 had decreased to 295, which was a 15% drop in comparison to 2006, although the first half of 2008 had seen a substantial rise in figures in comparison to the corresponding period in 2007. Lettuce continued to be the most popular vegetable species whereas last year saw a sharp drop in tomato and *Brassica oleracea* applications. Since the change in Dutch legislation two years previously, which allowed a dual application for Dutch national listing and national plant breeders rights at no additional cost and under the same procedure, vegetable seed companies from throughout the EU had altered their way of filing Community rights applications, so that the vast majority of vegetable applications now filed at the CPVO had previously been filed via the aforementioned procedure in the Netherlands; the consequence of this was that the CPVO now undertook many more "take overs" than technical examinations with the Dutch authorities, and was a reversal of what had been the norm in the CPVO vegetable sector during the previous decade. In conjunction with Naktuinbouw, the CPVO was organizing on October 7, 2008, in Roelofarendsveen, an open day for vegetable breeders and examination offices to explain the intricacies of Community rights and their relationship to national listing, and to discuss current topics of interest/difficulties in the sector. With respect to research and development (R&D) projects, the CPVO co-funded project "Harmonisation of resistance tests for diseases of vegetable crops in the European Union" was finalized in 2007, and having already adopted the recommendations for tomato diseases within its protocol, the CPVO would look to implement by the end of 2008 the recommendations for French bean in a revision to its protocol. The other R&D project "Development and evaluation of molecular markers linked to disease resistance genes for tomato DUS testing (option 1a)" between three of the CPVO's examination offices for tomato, was also finalized in 2007. The final report of the project expressed a very positive outcome, with molecular markers showing a very close correlation to physiological tests for all the asterisked disease resistance characteristics included in the study. The three project partners would carry out a ring trial with a set of reference and candidate tomato varieties during 2008 to look in particular at the reliability of the biomolecular tests in relation to the uniformity criteria, and a possible future implementation of such tests for DUS testing in that crop. The results and conclusions of the project would be presented in further detail at the current session of the TWV and at the eleventh session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) in Madrid in September 2008.

24. An expert from France reported that the procedure for that country to ratify the 1991 Act of the UPOV Convention was underway. He reported that the duration of PVP rights had been extended to 20 and 25 years. Morphological and molecular characteristics were used in combination for the management of reference collections. Genetic markers for new disease characteristics had been evaluated. For each disease taken into account for DUS testing in France, reference varieties and strains had been harmonized and were available for all breeders. The main station of the *Groupe d'étude et de contrôle des variétés et des semences* (GEVES) based in La Miniére was moving to Angers and would start work at the end of 2008.

25. The expert from the United Kingdom reported that new fees had been introduced in spring 2008, following the completion of a review of the National List and plant breeders' rights test costs for recovering full costs. On April 1, 2008, the Scottish Agricultural Science Agency ceased to be a government agency and was transferred back into the Scottish Government. This institute would continue to be known as SASA which now stood for "Science and Advice for Scottish Agriculture". In 2007, SASA took responsibility for the official maintenance of approximately 150 traditional vegetable varieties and approved maintenances on the United Kingdom National List, to ensure their long-term availability to amateur growers. SASA

undertook characterization trials on landraces and traditional varieties in preparation for the implementation of the European Union directive on conservation varieties.

26. A representative from ISF explained that he was pleased to participate in the session and was especially interested in the discussion on varieties with low germination (documents TWV/42/13 and TWV/42/15).

(b) Reports on developments within UPOV

27. The TWV received an oral report from the Office of the Union on the latest developments within UPOV.

Applications for Varieties with Low Germination

28. The TWV considered documents TWV/42/13 and TWV/42/15.

29. In introducing document TWV/42/13, the expert from the Netherlands noted that the UPOV Test Guidelines did not specify germination standards and it was a matter for members of the Union to set an appropriate germination standard: in many cases, that was based on the commercial seed standards. He noted that it would be important for UPOV to develop suitable guidance concerning varieties with particularly low germination in order to develop a harmonized approach.

30. A representative of ISF noted that the situation concerned specifically parent lines. An expert from the Netherlands noted that all varieties were potentially parent lines, which would make it difficult to develop criteria limited to parent lines.

31. The Chairman sought clarification on whether the low level of germination of the types of varieties addressed in document TWV/42/13 and TWV/42/15 affected the expression of the characteristics of the variety in such a way as to adversely affect the DUS examination. An expert from the Netherlands explained that that was sometimes the case. An expert from Germany explained that variable times of germination and different levels of vigor would make it difficult to assess uniformity.

32. The TWV discussed the possibility of requiring the breeder to submit pre-germinated seed or plantlets. A representative of ISF suggested that it would be advisable to avoid the need for selection of seed or plants by the breeder before the sample was submitted for DUS examination. An expert from France noted that there was a risk that the seeds which did not germinate might have a different genotype than those which did germinate. An expert from the Netherlands noted that there was always a theoretical possibility that non-germinated seeds would have a different genotype. The TWV noted that, with regard to parent lines, the risk could be addressed by considering the uniformity of the hybrids, or possibly by the use of biochemical or molecular techniques.

33. The TWV agreed that it was important to consider how it might be possible to resolve the situation in a way which would allow breeders to obtain protection for varieties which would necessarily have low germination. In that respect, it was agreed that it would be necessary to have information on specific cases. An expert from the Netherlands agreed to present results of work in the Netherlands on such varieties, at the forty-third session of the TWV.

Molecular Techniques

34. The TWV noted the report of developments in UPOV on molecular techniques, as set out in document TWV/42/2.

35. An expert from the Netherlands suggested that it might be useful for the TWV to take a view on the possibility of conserving DNA-fingerprints of protected varieties, as discussed at the *Ad Hoc* Crop Subgroup on Molecular Techniques for Rose, at its second session. The TWV noted that it would be more appropriate to consider the conservation of DNA samples, because changes in DNA-profiling techniques could render DNA-profiles developed by older techniques obsolete. Furthermore, the TWV agreed that, while the conservation of DNA samples might be of interest for vegetatively propagated varieties, it would not be of particular interest for seed-propagated varieties because the storage of seed would be relatively easy and more useful than DNA samples.

36. A representative of ISF stated that any arrangements for storage of DNA samples would need to be at the request of the breeder if costs were involved. The Technical Director explained that due consideration would need to be given to the legal aspects where DNA samples were not taken for the purposes of DUS examination of the candidate variety. The TWV noted that DNA samples might be of relevance for the management of reference collections.

37. The TWV received a report from the expert from the European Community on a project on the results and preliminary conclusions on the CPVO R&D project "Development and evaluation of molecular markers linked to disease resistance genes for tomato DUS testing"; investigating an "Option 1(a)" approach on the use of molecular characteristics which are directly linked to traditional characteristics (gene specific markers). The project partners from the Netherlands, Spain and France developed and evaluated the Option 1(a) approach for the asterisked (obligatory) disease resistance characteristics in the applicable CPVO tomato DUS protocol TP/44/2 (which was based upon the UPOV Test Guidelines for Tomato: TG/44/10). Molecular marker assays were developed for the *Verticillium* genes Ve1 and Ve2, the Tomato Mosaic Virus Tm1 (linked marker), the Tomato Mosaic Virus Tm2 and $Tm2^2$ genes, the *Meloidogyne incognita* Mi1-2 gene, the *Fusarium* I locus (linked marker) and the *Fusarium* I2 locus. The markers were tested for their robustness and subsequently validated in a set of tomato varieties. In 97% of the cases the molecular marker assays confirmed the results obtained from the pathogenesis assays. Pathogenesis assays and marker assays gave identical results for the nematode resistance gene Mi1-2 and ToMV resistance genes. For the fungal resistance genes for *Verticillium* and *Fusarium* minor deviations between the pathogenesis assay and marker assay were observed. Observed discrepancies were most likely due to the pathogenesis assay, those being strongly dependent on the conditions used to carry out the assay and on the inoculums, as well as being more difficult to standardize due to the more subjective interpretation with respect to the assays for virus and nematode resistance. Marker assay had the advantage that the results were clearer and homozygote/heterozygote presence of the resistance gene could be detected. Markers assays were also good at spotting heterogeneity.

38. The expert from the European Community further reported that a meeting between the CPVO and EU examination offices for tomato had taken place earlier in 2008 to discuss the project results and discuss their possible implementation as a complement or even substitute for the disease resistance pathogenesis tests in that crop. It was felt that the most reliable results emanated from the molecular tests for nematode resistance and for ToMV resistance, therefore

the project partners would conduct a ring test during 2008 on a set of example varieties to verify the repeatability and reproducibility of the technique for distinctness purposes, as well as a more detailed study on numerous candidate varieties in respect of whether it could also be applied for uniformity purposes. The results from the ring test would be available in early 2009. A detailed paper on the project would be presented at the BMT/11 session in September 2008. Depending on the results of the ring test, the TWV43 session in 2009 could consider including some of the molecular marker techniques as an approved methodology for certain disease resistances in the revision of the Test Guidelines for Tomato: TG/44/11; if that were to happen he noted that it would be the first time that an Option 1(a) approach had been included in UPOV Test Guidelines.

39. An expert from France noted that the CPVO project had been based on a small number of plants and wondered whether the technique would be any cheaper than the bioassay if the tests had to be done on the number of plants required for the DUS examination. An expert from the Netherlands wondered whether it would be acceptable to declare a variety distinct solely on the basis of a DNA analysis and suggested that consideration might also be given to using DNA techniques in conjunction with a bioassay. He also reported that breeders were seeking to develop new approaches to disease resistance which might be difficult to assess by such a DNA analysis.

40. The TWV noted that the CPVO project would be reported at the eleventh session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) and that there would be a further report at the forty-third session of the TWV.

TGP Documents

41. The Office of the Union considered the TGP documents below on the basis of documents TWV/42/3 and TWV/42/3 Add.

(a) New TGP documents

TGP/8 Trial Design and Techniques Used in the Examination of Distinctness, Uniformity And Stability (document TGP/8/1 Draft 10)

42. The TWV considered documents TWV/42/3 and TGP/8/1 Draft 10.

43. With regard to the invitation by the TC (document TWV/42/3, paragraph 16(a)) to advise if there is a need for additional off type tables in TGP/8 to cover new combinations of population standards and acceptance probabilities, the TWV agreed that no such need existed for vegetables.

44. In relation to document TWV/42/3, paragraph 16(b), to consider if it would be necessary to conduct a comparison of the results of different statistical methods as a condition for their inclusion in TGP/8, the TWV agreed that some form of peer review, similar to that used for the development of Test Guidelines, would be appropriate to ensure that any methods would be fit for purpose.

45. Concerning document TWV/42/3, paragraph 16(c), to consider including statistical methods for very small sample sizes, the TWV agreed that such methods would be of particular interest for vegetables.

46. The TWV made the following comments on document TGP/8/1 Draft 10:

	PART I: DUS Trial Design and Data Analysis
3	Control of variation due to different observers: The TWV noted that it had encouraged the development of that section and agreed that it should provide suitable text for aspects which were not adequately covered in document TWC/25/12.
	PART II: Techniques Used in DUS Examination
2.	Parent formula of hybrid varieties: The TWV proposed that it should be explained in TGP/8 that it was a choice for authorities to use the parent formula approach for hybrids and not an obligation and to explain that the Test Guidelines would include mention of this method where considered to be useful. The TWV also proposed that guidance should be given in TGP/8 and/or TGP/7 that authorities should not request material of parent lines for the examination of hybrid varieties if the parent formula approach was not used to examine the hybrid.

TGP/11 Examination of Stability

47. The TWV considered document TGP/11/1 Draft 10 and the report on developments in the TC and CAJ concerning that document in document TWV/42/3.

48. The TWV confirmed its support for its original proposal which was to seek to develop a document on how to address problems concerning stability which were brought to the attention of an authority after the grant of a plant breeder's right, with the possibility for such a document to be extended to address problems concerning distinctness, uniformity and novelty which were brought to the attention of an authority after the grant of a plant breeder's right and to consider the status and use of the "official" variety description.

TGP/12 Special Characteristics (document TGP/12/1 Draft 5)

49. The TWV considered document TGP/12/1 Draft.

50. The TWV noted the report from the TWO that a characteristic for frost tolerance had been investigated by the European Community but had not resulted in distinctness. The TWV agreed with the TWO conclusion that the section on frost tolerance should be deleted from TGP/12.

51. The TWV received the following proposal from Mr. Kees van Ettekoven (Netherlands):

"In TGP/12, the principles on the use of disease resistance characteristics are given. Besides these principles there are other elements to consider when mentioning disease characteristics in UPOV guidelines:

"1. The nomenclature of the pathogens

"As in the plant kingdom, also in the field of pathogens the denomination of the subject is important in order to correctly identify the various diseases. As in the plant kingdom the names of pathogens sometimes change as a consequence of improved insight in the pathogen and its relation with other pathogens. The use of the proper name is therefore important. In principle, the UPOV Test Guidelines should follow the latest valid taxonomic views. This principle has two disadvantages: the UPOV Test Guidelines are not revised annually and in practice the users of the pathogen names may be familiar with the old name and not yet with the new name. In the ISF disease resistance coding working group, faced with the same problem, the following solution was introduced: a new denomination is given in brackets behind the old name with the prefix 'new' for a period of 5 years. After 5 years, the situation is reversed: the new name is given with behind it in brackets the old name with the prefix 'old' for a further period of 5 years. After the latter period of five years, only the new name is given. It is proposed to follow the same principles in the UPOV Test Guidelines in order to avoid confusion and have maximum clarity.

"2. The use of abbreviations

"In practice, the scientific binomial for the pathogens is often replace by a code. In the ISF disease resistance coding working group a system of codes was introduced to ensure uniformity in the use of these codes. The codes are logically derived from the names of the pathogens and can also be found on the ISF website: www.worldseed.org. It is proposed to introduce the disease codes in the UPOV guidelines

"3. The nomenclature of races and strains

"As with the names and codes of the diseases, also the correct naming of the races and strains needs to be observed to avoid confusion. It is proposed to implement the race nomenclature developed by ISF in the UPOV Test Guidelines."

52. The TWV agreed that the proposal from Mr. van Ettekoven represented an appropriate means of managing the naming of disease resistances. It agreed that that approach should be incorporated in document TGP/12 or TGP/7, and agreed that a decision on which should be postponed until its forty-third session. In the meantime, the TWV agreed that this development should not delay the adoption of TGP/12, because TGP/12 could be revised at a future date if necessary. The TWV agreed that, for its forty-third session, Mr. van Ettekoven should prepare draft guidance for inclusion in document TGP/12 or TGP/7 on the basis of his proposal, set out above, subject to the following:

(a) to include the names of the relevant pathogen naming organizations on which the names would be based;

(b) to include an explanation that the old and new name should be kept with the appropriate code, e.g. *Oidium lycopersicum* (Ol) (now *Oidium neolycopersici* (On))

(c) to explain that it would not be necessary to revise Test Guidelines in order to reflect changes in pathogen names

TGP/13 Guidance for New Types and Species (document TGP/13/1 Draft 12)

53. The TWV agreed the following with respect to document TGP/13/1 Draft 12:

2.7.4	the TWV noted the TWO proposal for the text to be amended to read "When sufficient varieties of common knowledge, or other plant material, can be collected […]"
4.4.3	the TWV noted that the reference to "minimum distance" was not consistent with document TGP/9/1 and agreed that the paragraph should be replaced with a reference to TGP/9.

54. The TWV noted that the TWF and TWO had agreed to add an item for reports from experts on their particular experiences with new types and species at their sessions in 2009 and agreed that it would be interesting to hear about the outcome of that initiative before agreeing to the inclusion of such an item in a future TWV agenda.

TGP/14 Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents (documents TGP/14/1 Draft 6, TWV/42/3Add. and TWV/41/10 Rev.)

55. The TWV considered documents TGP/14/1 Draft 6, TWV/42/3Add. and TWV/41/10 Rev. and agreed the following with regard to document TGP/14/1 Draft 6:

Section 2	Subsection 2: Shapes and Structures
I. Shape	the TWV agreed that it would be useful to consider developing a decision-tree, similar to that developed by Japan for color patterns in document TWV/42/3 Add.; Annex, for determining appropriate shape terms
	the TWV agreed with the TWO proposal to provide an explanation of orientation, with reference to base and apex, at the beginning of the subsection. However, the TWV agreed that TGP/14 should explain that it would not be obligatory to illustrate shapes with the point of attachment (base) at the bottom if that was not the natural orientation of the organ on the plant.
2.1.3	in accordance with the TWF and TWO, the TWV noted the alternative to develop a single pseudo-qualitative characteristic for shape rather than using the individual components of shape, provided that, in such cases, the difference between the states of expression was indicated in an illustration. It agreed that that was a possibility which would be useful in some cases.
II. Structure	the TWV noted the TWF proposal to provide an explanation of tree, shrub and semi shrub, based on the definition of shrub in TGP/14 and the explanation in the Test Guidelines for Hawthorn.
	Subsection 3: Color
II.1, 2.1	the TWV noted the TWO proposal that the definitions of the components of color should be deleted.
General	the TWV noted that:

	"The TWO agreed to start using the proposals set out in document TWF/39/3 Add. in the preparation of draft Test Guidelines for 2009. It noted that it would be necessary to develop a new state of expression in color pattern characteristics to describe the area of color which was previously described as the "main" color, (e.g. continuous dispersion). It was also agreed that the example in 4.2 of document TWF/39/3 Add. should be amended to read "Petal: shape of color [1]/[2] area. "The TWO agreed that it would still be important to retain the possibility to have a characteristic for number of colors in order to have a simple overall characteristic, but which was not used as the starting point to describe color pattern. It also agreed that it would be important to retain the option, where appropriate, to describe the color pattern by describing colors in specified parts of the plants (e.g. color of margin, color of basal zone etc.). "With regard to anthocyanin coloration, it was agreed that an example of characteristics should be included in TGP/14. "In order to develop and test the approach to color characteristics proposed in document TWO/41/3 Add., the TWO agreed to have an exercise on color in Alstroemeria, Canna and Phalaenopsis to see if characteristics based on that approach would be more effective than the traditional approach. The TWO agreed that the European Community should coordinate a subgroup to develop proposals for an exercise to be conducted by the TWO, in which the two approaches would be evaluated. The experts present at the session, from Australia, France, Germany, Japan, Mexico, Netherlands (Kees Grashoff), New Zealand, United Kingdom and the Office of the Union agreed to participate in the subgroup. The first draft of characteristics, to be prepared by the European Community according to the proposed new approach, would be circulated to the subgroup for comment by October 31, 2008, with 4 weeks for comments. On the basis of the comments, a new draft would be prepared by the European Community and checked by the subgroup. A circular presenting the exercise would be sent by the Office of the Union to the TWO by the end of February 2008, with 6 weeks for completion. The completed exercises by the TWO experts would be sent to the European Community, with a copy to the Office of the Union. The European Community would then prepare a TWO document, containing the compiled results of the exercise, 6 weeks before the forty-second session of the TWO."
TWV/42/3 Add.	the TWV agreed that consideration should be given to including "flecking" as a color pattern in the scheme in the annex to document TWV/42/3 Add.
	with regard to document TWV/42/3 Add., "(d) Color Change Over Time", the TWV agreed that characteristic 2 "Fruit: succession of colors" should be considered as a possible option for consideration in relation to relevant Test Guidelines. the TWV noted that: "The TWF supported the proposals set out in document TWF/39/3 Add.. With regard to characteristics for color changes over time, it noted that that matter would be discussed at its next session in relation to Peach. It was also noted that any such characteristics would need to fulfill the UPOV requirements for a characteristic.

	"The TWF proposed that the example of anthocyanin coloration in the flesh of peach could be used to illustrate the need to consider both the intensity and distribution of anthocyanin coloration in some cases."

(b) Revision of TGP Documents:

TGP/7: Development of Test Guidelines (documents TGP/7/1 and TWV/42/3)

56. The TWV considered the proposals for amendments to document TGP/7/1 as set out in document TWV/42/3, Annexes I and II and agreed the following:

Section 1.2: Individual Authorities' Test Guidelines

	(new section to be developed on the development of individual authority test guidelines from UPOV Test Guidelines) (to consider developing a more detailed section within TGP/7 for guidance on the development of an authority's own guidelines in the absence of UPOV Test Guidelines and, in particular, to include the possibility of providing a list of experts willing to provide guidance in the development of such guidelines) *The following experts agreed to be added to the list of experts willing to provide guidance in the development of an authority's own guidelines in the absence of UPOV Test Guidelines:* *Julia Borys (Poland)* *Niall Green (United Kingdom)* *Marian van Leeuwen (Netherlands)* *The TWV agreed that the section should explain that the purpose of the Technical Questionnaire characteristics was to propose characteristics to be described by the breeder.* *The TWV agreed that consideration should be given to providing guidance on how to implement revisions to Test Guidelines for varieties which have completed a growing cycle under a previous version of the Test Guidelines: in general, it was noted that the same version of the Test Guidelines should be used for a variety throughout the DUS test; however, it was noted that there would be important exceptions where, for example, it was necessary to introduce new states of expression or characteristics in order to examine a particular variety.* *The TWV noted the TWO proposal for the following amendments:* *(a) to include guidance on modifying the states of expression of characteristics in the Table of Characteristics, including asterisked characteristics;* *(b) to revise the section on example varieties to reflect the situation that not all authorities use the example varieties (e.g. Canada)* *The TWV agreed that any further comments on the draft section should be sent to the Office of the Union by August 31, 2008.*

Section 2: Procedure for the Introduction and Revision of UPOV Test Guidelines

2.1.6.2 etc.	*The TWF, TWO and TWV agreed to delete reference to UPOV Regional Technical Meetings.*
2.2.4	(to consider whether it would be useful to make reference in document TGP/7 to the "drafters kit", including the "Practical Guide for Drafters (Leading Experts) of UPOV Test Guidelines", posted on the first-restricted area of the UPOV website) *The TWF, TWO and TWV agreed.*
2.2.5	(consideration to be given to introducing deadlines for the submission of non-final draft Test Guidelines to the Technical Working Parties.) *The TWF, TWO and TWV agreed that the date for the submission of draft Test Guidelines to the Office of the Union (6 weeks before the TWF session) and the guideline date for the subgroup draft to be circulated by Leading Expert (14 weeks before the TWP session) should be met by the Leading Expert. In cases where either of those dates were not met, it was agreed that the Test Guidelines should be withdrawn from the agenda. The TWF and TWO agreed that that approach should be followed from their sessions in 2009. It was noted that meeting those dates would ensure that there would be sufficient time for consultation with relevant colleagues prior to consideration at the TWP session and would also ensure that it would be known at least four weeks in advance if planned Test Guidelines would not be discussed at a particular session.* *The TWV agreed that, where draft Test Guidelines were withdrawn from the agenda because of failure to meet the relevant dates, there should be the possibility for specific matters concerning those Test Guidelines to be discussed at the TWV session.* *The TWO and TWV agreed that the Office should provide the interested experts by name on the TG webpage, rather than by country / organization.*
2.3.3	*The TWV was informed of the TWO proposal to consider whether to create the possibility for partial revision of asterisked characteristics by TC by correspondence; and/or for members of the Union to add a footnote in the DUS reports for such cases until the revision are agreed by the TC.* *The TWV did not support the partial revision of asterisked characteristics by TC by correspondence, unless there was an important need for an urgent revision. It further agreed that the dates for partial revisions should be the same as for draft Test Guidelines.* *The TWV agreed that paragraph 2.3.3 should be amended to explain that specific proposals for partial revisions of Test Guidelines should be presented in a separate document and should not be incorporated in a draft of the complete Test Guidelines, which could be misinterpreted as a full revision.*

Annex 1: TG Template

3.4 / GN 10	*the TWV agreed to consider developing guidance on the number of plants to be included in the test according to type of propagation, method of sowing etc.*

3.5 / ASW 7	*(3.5 Number of Plants / Parts of Plants to be Examined* Paragraph 3.5 to be moved within Section 4.1 "Distinctness", to clarify that this section recommends the number of plants / parts of plants to be examined for distinctness. In addition, ASW 7 to be amended to the following: *"ASW 7 (Chapter 3.5) – Number of plants / parts of plants to be examined* Alternative 1: Unless otherwise indicated, all observations should be made on {x} plants or parts taken from each of {x} plants. Alternative 2: Unless otherwise indicated, all observations should be made on {x} plants or parts taken from each of {x} plants. In the case of observations of parts of plants, the number of parts to be taken from each of the plants should be {y}.") *The TWF, TWO and TWV agreed.*
4.2 / GN 11	(to consider the possible inclusion of the matters covered in Section 6 "Combining observations for all characteristics" of document TGP/10) *The TWF, TWO and TWV agreed. The TWV proposed that ASW might be developed on the basis of the Test Guidelines for carrot.*
5.2, 5.3	(to elaborate on the two uses of the grouping characteristics, i.e. "(a) to select, either individually or in combination with other such characteristics, varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness"; and "(b) to organize the growing trial so that similar varieties are grouped together". [underlining added for emphasis]; and to consider indicating in Chapter 5.3 of the Test Guidelines for which of those purposes the grouping characteristics were intended;) *The TWV noted that the TWO had agreed that it would not be appropriate to make such an elaboration. The TWV agreed that consideration should be given to amending (a) to read "to select, either individually or in combination with other such characteristics, varieties of common knowledge / varieties in the variety collection that can be excluded from the growing trial used for examination of distinctness"; and"*
6.3	(Quantitative characteristics the Test Guidelines should explain the use of the 3, 5, 7 abbreviated notes in the 1-9 scale for quantitative characteristics.) *The TWF, TWO and TWV agreed that the Test Guidelines should explain the use of the 3, 5, 7 abbreviated notes in the 1-9 scale for quantitative characteristics. The TWF, TWO and TWV also suggested to consider listing all 9 notes for the characteristics included in the Technical Questionnaire.*

Annex 2: Additional Standard Wording (ASW) for the TG Template

ASW 1	*The TWV proposed to consider developing additional standard wording and/or a guidance note, for Test Guidelines where a low germination could be expected for*

	certain types of varieties.
ASW 4: 1.	(to review whether ASW 4(1.) "Fruit species", and similar such explanations concerning satisfactory growing cycles, should be included in Chapter 3.1 of the Test Guidelines "Number of Growing Cycles". It noted that a consequential change would also need to be made to GN 9) *The TWF, TWO and TWV agreed.*
ASW 4: 2(b)	((TG Template: Chapter 3.3) – Conditions for conducting the examination: Information for conducting the examination of particular characteristics: Type of observation TGP/7 to be amended according to the wording agreed for TGP/9.) *The TWV noted that the TWO did not consider that it was necessary to introduce indications of VG, VS, MG, MS in the Test Guidelines developed by the TWO.*
ASW 4: 2(d)	((TG Template: Chapter 3.3) – Conditions for conducting the examination: Observation of color by eye to add that the color chart and the version of the color chart used should be specified with the variety description) *The TWF, TWO and TWV agreed.*
ASW 8: (GN 11)	((TG Template: Chapter 4.2) – Uniformity assessment In relation to Section 6 "Combining observations for all characteristics" in document TGP/10, the TC agreed that it would be necessary to consider the possible inclusion of that matter in the revision of document TGP/7/1 at its next session, when the development of that section of document TGP/10 would be more advanced.) *The TWF, TWO and TWV agreed.*
ASW 9	(to be modified because it would not be appropriate to test stability by growing a further generation for cross-pollinated varieties. Also proposed that the text "… to ensure that it exhibits the same characteristics as those shown by the previous material supplied." should be amended to read "… to ensure that it exhibits the same characteristics as those shown by the initial material supplied.") (to review the wording: "Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new [seed or plant] stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.", with a view to the possible deletion of ", either by growing a further generation, or" for some Test Guidelines, such as those covering synthetic varieties. In that respect, it is noted that the wording in ASW 9 is reproduced from the General Introduction, Chapter 7.3.1.2 (TC-EDC at its meeting on January 8, 2008) *The TWF, TWO and TWV agreed and noted that the change would need to be reflected in document TGP/11.*
ASW 16	(TG Template: Chapter 10: TQ 7.3) – Where a photograph of the variety is to be provided

	to add text indicating that guidance would be provided by the authority to enhance the usefulness of the photograph (e.g. to include a metric scale in the picture, to define what parts of the plant should be included; light conditions, background color, etc) *The TWV noted that the TWF/TWO had agreed that the European Community, in collaboration with Australia and Canada, should prepare a draft text.*
New 1.	(Chapter 1 of the Test Guidelines: Subject of these Test Guidelines to seek to develop Additional Standard Wording (ASW) for the following situations: (i) where there are separate Test Guidelines for different types of variety within the same genus/species (TWF: document TWF/35/11, paragraph 55); (ii) for Test Guidelines for rootstock varieties which do not include flower or fruit characteristics (TWA: document TWA/33/16, paragraph 31); (iii) for Test Guidelines covering hybrids with species / genera which are covered by other Test Guidelines.) *The TWV noted that the TWF and TWO had agreed that the Office of the Union should prepare suitable drafts based on the explanations used in existing Test Guidelines, e.g. Japanese Plum, Sweet and Sour Cherry and Prunus rootstocks. The TWV agreed with that approach and proposed .*
New 2.	(Chapter 3.1 to provide a new Additional Standard Wording (ASW) for crops where the two independent growing cycles are recommended to be in the form of two separate plantings, e.g. "The two independent growing cycles should be in the form of two separate plantings".) *The TWV heard that the TWF and TWO had noted the proposal. The TWV agreed that TGP/7 should explain that two independent growing cycles would also result from a single planting examined in two separate growing cycles.*
New 3.	(Chapter 8 to provide a standard definition of time of eating maturity.) *The TWF agreed that it would be appropriate to develop standard definitions for different situations and agreed that Germany would prepare draft texts. The TWO and TWV agreed with that proposal.*
New 4.	(Chapter 8 to consider the development of a simple, generalized growth stage key for use in Test Guidelines covering crops and species for which a suitable growth stage key had not been published) *The TWV noted that the TWF and TWO had agreed that there was no requirement to develop such a growth stage key for fruit crops. However, the TWV agreed that the BBCH generalized growth stage key should be considered in the next draft of TGP/7.*

Annex 3: Guidance Notes (GN) for the TG Template

GN 7	*the TWV noted that:* *"the TWO agreed that the number of plants requested in Chapter 2.3 of the Test Guidelines should correspond to the number of plants in Chapters 3.4 and 4.2. It also agreed that TGP/7 should provide guidance on how to address "spare" plants received in excess of the minimum number of plants required for DUS test. In particular, with regard to a DUS test designed for 5 plants, it proposed that guidance on that situation might be provided in the Test Guidelines. The TWO also questioned whether DUS tests should be based on 5 plants because of the consequences for the uniformity standard if 6 plants were planted and survived."* *The TWV agreed that any guidance should reflect the need for additional plants for, e.g. disease resistance tests*
GN 8	*the TWV agreed TGP/7 should explain that the phrase "minimum duration of test should normally be" indicated that the duration of the test could be shorter in certain cases.*
GN 11	see ASW 8 comments
GN 19 (3)	(Numbers requirement for numbers lower than 10 to be written and higher numbers to be indicated numerically to be deleted) *The TWO and TWV agreed that, in general, numerals should be used except, for example, for the states of expression in Table of Characteristics where notes were provided*
GN 20	(to consider whether the revision of Test Guidelines might not fully follow the guidance on the presentation of characteristics in document TGP/7 if that would involve substantial revision of databases of variety descriptions, which would not otherwise be necessary.) *The TWF, TWO and TWV agreed that the need for a substantial revision of databases of variety descriptions should not be an automatic reason not to follow the guidance in document TGP/7 and agreed that the situation needed to be considered on a case-by-case basis.*
GN 20 (1)	(Presentation of characteristics: States of expression according to type of expression of a characteristic to clarify that adjectives such as moderately, medium, etc. (e.g. much smaller (1), moderately smaller (3), etc. / light green (1), medium green (2), etc.) should be used for pseudo-qualitative characteristics and for quantitative characteristics where there are one or more fixed states) *The TWF, TWO and TWV agreed that it would be helpful to provide examples in order to consider the proposal.*
GN 20 (3)	(Quantitative characteristics: Explanation to explain that the notes for quantitative characteristics should be meaningful in relation to the range of variation of the characteristic and for the assessment of distinctness)

	The TWF, TWO and TWV agreed.
GN 20 (3)	(Quantitative characteristics to provide guidance on the use of a scale with more than 9 notes.) *The TWF, TWO and TWV agreed.*
GN 20 (3)	(3.5 "Condensed" range to consider accepting a 3-state range where there is no fixed point, e.g. weak/medium/strong, on the basis that the second state should read "intermediate") *The TWF, TWO and TWV agreed and noted the example of overlapping of petals.*
GN 20 (4.4.1)	*The TWF, TWO and TWV agreed to delete state 2 "yellow" from the example of a qualitative characteristic*
GN 28	(to discuss the inclusion of example varieties in Test Guidelines) *The TWV noted the following comments by the TWF and TWO:* *The TWF recalled the presentation by Japan on the comparison of example varieties grown in the greenhouse and field, noting that there was good correspondence for qualitative, pseudo-qualitative and some quantitative characteristics (e.g. ratios) and suggested to concentrate discussions on those quantitative characteristics where there was less good harmonization. It suggested that Japan should be encouraged to present the results of its work on Strawberry at the other Technical Working Parties.* *The TWF agreed that, if that was not already sufficiently clear, document TGP/7 should explain that example varieties from experts in different locations should not be combined in the same characteristic, unless those example varieties were verified by the Leading Expert.* *The TWF also proposed that consideration be given to indicating the drafters of the Test Guidelines in the adopted Test Guidelines in order to provide a contact for breeders and other parties seeking assistance in obtaining example varieties.* *The TWO noted that there would be general discussion on the inclusion of example varieties in UPOV Test Guidelines. It was agreed that photographs and illustrations could be a more effective way of illustrating characteristics than example varieties, which were not always readily available. With regard to the use of example varieties for the harmonization of variety descriptions, it was not known to what extent that was achieved. It was noted that a number of members of the Union did not use the example varieties included in the Test Guidelines for their own guidelines. Furthermore, for some Test Guidelines, the example varieties would not be appropriate for all regions.* *The TWO noted that the need for the inclusion of example varieties in the Test Guidelines acted as a check on the usefulness of states of expression.* *The TWO noted that some denominations in the form of numbers, which were specified in the Technical Questionnaire, were more difficult to identify because the varieties were marketed under a trade name.*

	It was noted that example varieties in the authority's own guidelines were an important means for some members of the Union to check the description of varieties over time. *The TWV supported the inclusion of example varieties in the Test Guidelines according to the existing rationale and guidance in TGP/7/1. With regard to indicating the drafters of the Test Guidelines in the adopted Test Guidelines, the TWV observed that the Test Guidelines were endorsed by all members of the Union. It noted concerns about the number of enquires which might result from publishing the drafters of the Test Guidelines and recalled that that information was available to UPOV members and observers in document TC/[44]/2.*
GN 29	(to consider the possibility of introducing a table of trade names associated with the denominations of the example varieties) *The TWV noted the following comments by the TWF and TWO:* *The TWF agreed in principle, but emphasized the need to explain the risks and the need to distinguish between trade names and trademarks.* *The TWO noted that trade names may not be registered (e.g. may or may not be trademarks) and noted, in particular, that trade names are not exclusively linked to a single variety. On that basis, it agreed that it would not be appropriate to seek to develop table of trade names in Test Guidelines.*
New	(TG Template: Chapter 10: TQ 7 – TQ / Non-asterisked characteristics With regard to Technical Questionnaire characteristics (e.g. some disease resistance characteristics) which do not have an asterisk in the Table of Characteristics (see document TC/43/5, paragraph 35) the TC agreed that where information on such characteristics was to be requested in the Technical Questionnaire, that information should be requested in Section 7 of the Technical Questionnaire (Additional information which may help in the examination of the variety), rather than in Section 5 (Characteristics of the variety to be indicated). In that respect, it noted that the information in Section 7 was provided at the discretion of the breeder/applicant.) *The TWV noted the following comments by the TWF and TWO:* *The TWO agreed that TGP/7 should explain that some TQ characteristics (e.g. plant height, plant width, time of flowering etc.) were not used for grouping, but provided important information for practical planning of the trial.* *The TWO also agreed that TGP/7 should explain that the TQ characteristics should be sufficient for effective grouping of varieties, on the basis that the grouping characteristics in the Test Guidelines would be used routinely for grouping, but that for some varieties, other characteristics in the TQ would be necessary to provide effective grouping.* *The TWO agreed that the standard wording in the Test Guidelines should explain that care was particularly needed for grouping with PQ and QN characteristics where the description was produced at a different location,*

	as was the case for information provided in the TQ. *The TWV proposed to include disease resistance characteristics in Section 5 of the Technical Questionnaire, even where the characteristics did not have an asterisk in the Table of Characteristics. It noted that it would be necessary to explain that it may not be possible for breeders to conduct the tests in some territories and proposed to add a tick box to indicate where the tests had not been conducted.* *The TWV considered that it would be important to explain the risk of using TQ characteristics for grouping which were not indicated as useful for grouping in the Test Guidelines.*

Annex 4: Collection of Approved Characteristics

Introduction	(to be clarified that characteristics contained in adopted UPOV Test Guidelines may be omitted from the "Collection of approved characteristics" (document TGP/7, Annex 4) where considered appropriate by the TC, on the basis of recommendations by the Enlarged Editorial Committee (TC-EDC)) *The TWV observed that that approach was not the most elegant means of addressing problematic characteristics* (to explain that the indication of the characteristic number, the method of observation, type of characteristic and the indications of (+) and (*) had been retained from the Table of Characteristics from which the characteristic had originated, but to clarify that that information might not be appropriate for other Test Guidelines) (to explain to drafters of Test Guidelines that, for characteristics where any element of the characteristic is changed after copying from the collection, the translations into French, German and Spanish should be deleted) *The TWV agreed.*
Collection	(examples of color characteristics developed in conjunction with TGP/14 Section 2.3: "Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents: Botanical Terms: Color" to be incorporated into TGP/7: Annex 4 "Collection of Approved Characteristics". (It was noted that that might require the organization of the TGP/7 to be modified to some extent.)) (to consider incorporating characteristics which are used in most Test Guidelines (e.g. Leaf: length) into the electronic template. To consider developing electronic templates for variety types (e.g. seed-propagated vegetables) which would incorporate more standard characteristics for the varieties concerned) *The TWV agreed that experience had demonstrated that such an approach would not be appropriate.* (to consider including a collection of approved illustrations and to consider making that collection available to breeders to assist in their applications for PBR. (see also TGP/14 Section 2.1: Plant shapes)) (to consider the development of tools such as CD-ROMs containing

	photographs to enhance the understanding of the characteristics used in the Test Guidelines and thereby reduce observer error) *The TWV agreed.*

Discussion on Draft Test Guidelines

Agaricus L.

57. The subgroup discussed document TG/AGARIC(proj.2), as presented by Mr. Sergio Semon (European Community), and agreed the following:

Cover page	to include the UPOV codes corresponding to *Agaricus bisporus* L. (AGARI_BIS), *Agaricus bitorquis* L. (AGARI_BIT), and *Agaricus arvensis* L. (AGARI_ARV);
1.	to read: "These Test Guidelines apply to all varieties of *Agaricus bisporus* L., *Agaricus bitorquis* L. and *Agaricus arvensis* L. of the family A*garicacea.*"
2.1	to delete the word "fungal"
2.4	to read: "If spawn is delivered it should be of a quality which ensures that all relevant characteristics of the variety will be expressed. In particular, mycelium on grain should be visible to the naked eye, the grain should not be colonized to such an extent that kernels stick together. The spawn should not be older than 6 months and having been stored under proper conditions (i.e. 2-4 °C). "
2.6	to delete the word "fungal"
3.4.1	to be reviewed, in particular with respect of the number of replicates, so that the total number of fruit bodies will be reduced
Char. 1	to read: "Basidium: average number of spores; to be indicated as QN; example varieties for state 3 to be provided
Chars. 2 to 5	to be indicated as VG/MS;
Char. 3	to read: "Stipe: diameter" with the states "narrow (3), medium (5), broad (7)"
Chars. 6 and 7	to be merged into one characteristic reading: "Stipe: swollen base" with the states of expression "absent or very weak (1), weak (3), medium (5) strong (7)"; to be indicated as QN VG; to receive illustration in Chapter 8.1
Chars. 9 to 11	to be indicated as VG/MS
Char. 12	to replace "transverse elliptic" with "oblate"
Char. 13	to be indicated as VG/MS
Char. 14	to read: "Cap: scaling"
Char. 16	to include an example variety for state "pink", if not, this state to be deleted
Char. 19	to provide illustration to explain the states of expression; to receive 1-3 scale
Char. 21	the leading expert to check the wording of the characteristic and explanation

Chars 22 to 25	to replace these characteristics with the two characteristics reading: "Flushing pattern: first day of harvest" "Flushing pattern: peak first day flush" with states of expression, example varieties and explanation to be provided
TQ 4	to be checked against the standard wording

Cauliflower (revision)

58. The TWV considered documents TG/45/7(proj.3) and TWV/42/14, introduced by Mr. François Boulineau (France), and agreed that the following characteristics should replace characteristics 26.1 to 26.3 in document TG/45/7(proj.3):

26. (*)	**MS**	**Earliness in spring planting**		
		very early		1
(+)		very early to early		2
QN		early		3
		early to medium		4
		medium		5
		medium to late		6
		late		7
		late to very late		8
		very late		9
27. (*)	**MS**	**Earliness in summer planting**		
(+)		very early autumn type		1
QN		very early to early autumn type		2
		early autumn type		3
		early to medium autumn type		4
		medium autumn type		5
		medium to late autumn type		6
		late autumn type		7
		late to very late autumn type		8
		very late autumn type		9
		very early winter type		10
		very early to early winter type		11
		early winter type		12
		early to medium winter type		13
		medium winter type		14
		medium to late winter type		15
		late winter type		16
		late to very late winter type		17
		very late winter type		18

Ad. 26, 27	to read "In cauliflower, earliness is strongly influenced by the temperature and the season of growing. Nevertheless, at the same place and for the same

	growing season, earliness is an important characteristic for the assessment of distinctness of varieties. For those reasons, no example varieties are provided in the Test Guidelines and the variety description should always state the place and the season of growing."

Cowpea

59. The subgroup discussed document TG/COWPEA(proj.2), presented by Mr. Mitsuo Yuasa (Japan), and agreed the following:

Title	to replace "Cowpea" with "Asparagus-bean" or "Yard-long-bean" (to check which is most widely known)
Altern. names	"(Cowpea – part)," to be deleted
5.3	to add paragraph number "5.3" and to add Char. 21 "Seed: secondary color"
Char. 2	to be indicated as MG
Char. 3	to be indicated as VG/MG and to add (+) and provide illustration
Char. 5	to be indicated as VG/MG and to have the states: short (3); medium (5); long (7)
Char. 6	to be indicated as VG/MG
new (after 7.)	to read "Flower bud: color", to be indicated as PQ, with the states yellowish (1); light green (2); medium green (3)
Char. 8	to be indicated as MG and to add (+) with explanation
Char. 9	to add (*) and state 3 to read "medium reddish purple"
Char. 10	to be indicated as VG/MG
Char. 11	to be indicated as VG/MG
Char. 12	to add (*)
Char. 13	to have notes 1, 2, 3
new (after 16.)	to read "Pedicel: length", to be indicated as QN, VG/MG; to have the states: short (3); medium (5); long (7); and example varieties to be provided by China if available
Char. 17	to be indicated as VG/MG
Char. 18	to be indicated as VG/MG
Char. 21	to add (*)
Char. 23	to add (*)
Ad. 8	to be provided
TQ 1.2	to read "Asparagus-bean" or "Yard-long-bean" (to check which is most widely known)
TQ 5	to add Char. 21 "Seed: secondary color"

Dock

60. The subgroup discussed document TG/RUMEX (proj.3), as presented by Ms. Nadiya Leshchuk (Ukraine), and agreed the following:

1.	to correct the spelling of *"Polygonaceae"*
3.4.1	to read: "Each test should be designed to result in a total of at least 60 plants, which should be divided between two or more replicates."
3.4.2	to read: "The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations, which must be made up to the end of the growing cycle."
4.2.2	to be replaced with the standard sentence for the uniformity assessment for cross pollinated varieties
5.3	to be checked
Chapter 7 (general)	order of characteristics to be checked so that the characteristics will be placed in the chronological order of observation; the example variety "Rumex OK-2" to be replaced globally by "Schavnat"
Char. 1	to replace "long" by "tall"; to be indicated as QN; to receive explanation to indicate that this characteristic should be observed in the second year
Char. 2	to read: "Plant: attitude of rosette leaves"
Char. 3	to read: "Rosette leaf: intensity of green color"
Chars. 4 to 6	to retain only one picture in Chapter 8.2 to indicate the length and the width of rosette leaf blade
Char. 6	to read: "Rosette leaf: ratio length/width of blade; to check the allocation of the example varieties
Char. 7	to receive illustration in Chapter 8.2
Char. 8	to receive illustration in Chapter 8.2, to check whether to be indicated as QL or PQ
Char. 9	to read: "Rosette leaf: incisions of margin"
Char. 10	to retain only one picture in Chapter 8.2 to indicate the length of petiole
Char. 11	the states of expression to read: "oblong (4), elliptic (1), circular (2), polyhedral (3)"; to improve the illustration
Char. 12	to be indicated as QN
Char. 13	to be indicated as VG/MS
Char. 14	to read: "Stem: number of internodes"; to be indicated as VG/MG
Char. 16	to check the example variety "Biekor-1" appearing both for the state "light" and for the state "dark"
Chars. 17 to 19	to receive a picture in Chapter 8.2 to indicate the length and the width of stem leaf blade
Char. 19	to read: "Stem leaf: ratio length/width of blade; to check the allocation of the example varieties; to be indicated as MS/VG
Char. 20	to receive a picture in Chapter 8.2 to indicate the length of petiole

Char. 21	the states of expression to read: " smooth (3), medium (5), rough (7)"
Char. 22	to receive illustration in Chapter 8.2 to explain how to assess this characteristic
Char. 23	to read: "Plant: time of the beginning of bolting in the second year"; to receive illustration in Chapter 8.2
Char. 25	to receive illustration in Chapter 8.2 to explain how to assess this characteristic; to check whether this characteristic is linked to characteristic 23
Char. 26	to check the botanic terms used as the names of states of expression
Char. 27	the illustration in Chapter 8.2 to be improved so that the length of petiole will be clearly indicated
Char. 29	to read: "Seed: time of maturity"; to receive illustration in Chapter 8.2 to explain how to determine maturity
Char. 32	to be deleted
8.1	explanations to be given on observations on "the rosette leaf", "the stem" and "the stem leaf"
8.3	explanation to be provided to illustrate the life cycle of dock
TQ 4.2	appropriate options, chosen from the standard wording, to be inserted
TQ 6	an example to be inserted
TQ 7.3	the reference to a representative color photograph to be removed

Maize (Revision)

61. The subgroup discussed document TG/2/7(proj.3), as presented by Mrs. Zsuzsanna Füstös (Hungary), and agreed the following:

General	to replace "open pollinated" with "open-pollinated"
	to check French translation of characteristics
6.5	to add "PC: popcorn variety" and to indicate "(PC)" for relevant varieties in the Table of Characteristics
Char. 2	to replace "tip" with "apex" and to replace "round" with "rounded"; to check whether state 5 exists
Char. 4	to delete "very" in state 1
Char. 6	to read "Leaf: curvature of blade", with the states: to have the states: absent or very weak (1); weak (3); medium (5); strong (7); very strong (9)
Char. 7	to delete "degree of"
Char. 10	to add (+) and add reference to Ad.10 in Ad.9
Char. 13	to read "Tassel: curvature of lateral branches", with the states: absent or very weak (1); weak (3); medium (5); strong (7); very strong (9)
Char. 14	to be indicated as MS/MG
Char. 18	state 3 to read "moderately lax"; state 5 to read "moderately dense"
Char. 24.1	to read "Only inbred lines and varieties with ear type of grain: sweet or pop: …"

Char. 24.2	to read "Only hybrids and open-pollinated varieties, excluding varieties with ear type of grain: sweet or pop: …"
Char. 25	to add (+) and provide illustration
Char. 26	to be indicated as MS/VG
Char. 32	to read "Only varieties with ear type of grain: sweet: …"; and to add (+) and provide illustration
	the subgroup noted the photographs provided by Japan of varieties with 3 colors (at stage 92); it agreed that it would be necessary to have an explanation of the genetic background of those varieties before considering the introduction of a new characteristic
Chars. 33, 34, 35, 37	to read "Only varieties with ear type of grain: sweet: …"
Char. 38	to read "Only varieties with ear type of grain: pop: …"; to be indicated as PQ
Chars. 39, 40	to add (+) with explanation of "main" color
Char. 40	to read "Excluding varieties with ear type of grain: sweet: …"
8.1 (e)	to provide explanation or reference for "Xenia effect"
TQ 1	to add tick boxes for the states in Char. 36
TQ 6	to be amended

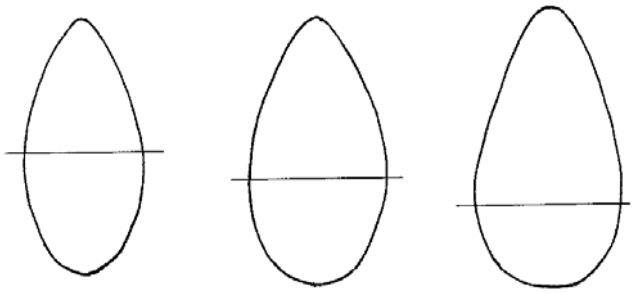
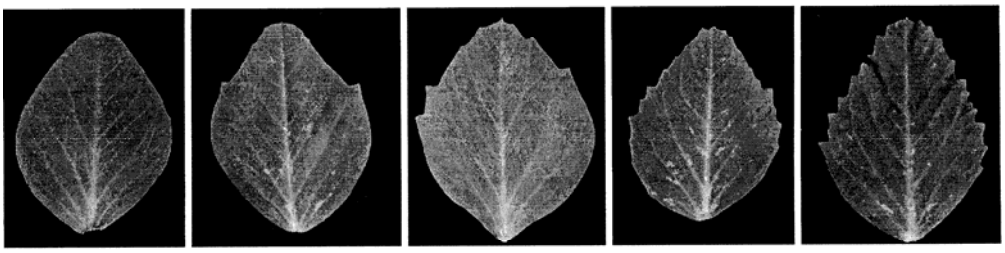
Pea (Revision)

62. The subgroup discussed document TG/7/10(proj.5), as presented by Mr. Niall Green (United Kingdom), and agreed the following:

Altern. names	to delete "Field Pea"
5.3	to replace Char. 5 with Char. 6
5.3	to add Char. 60 "Resistance to *Fusarium oxysporum* f. sp. *pisi*" and to invite the TWA to consider how to accommodate the need for that characteristic for grouping in vegetable pea, while it might not be used for grouping in agricultural pea varieties.
Char. 2	to have the states: absent (1); single ring (2); double ring (3)
Char. 3	to be deleted (see amendment to Char. 2)
Char. 4	to add (*)
Char. 7	to include all example varieties from Char. 8 for state 2 in Char. 7
Char. 10	to be indicated as MS/MG
Char. 11	(+) and Ad. 11 to be deleted
Char. 14	state 1: to replace "to" with "or"
Char. 19	to be indicated as VG

Char. 22	to delete “maximum” and add an explanation that the characteristic should be observed on the part of the plant with most flecking
Char. 23	to read “Petiole: length from axil to the first leaflet or tendril”
Char. 24	to read “Only varieties with leaflets absent: Petiole: length from axil to last tendril ”
Char. 25	to be indicated as MG/MS
Char. 26	to read “Only varieties with stem fasciation absent: …” and to provide an explanation of the determination of all notes
Char. 27	to read “Only varieties with plant anthocyanin coloration present: …”
Char. 28	to read “Only varieties with plant anthocyanin coloration absent: …”
Char. 36	to replace “1st” with “first”
Char. 40	to add example variety “Bamby” for state 1
Char. 41	to read “Only varieties with pod parchment not entire: …”
Char. 42	to read “Only varieties with pod thickened wall absent: …”
Char. 43	to delete “degree of”
Char. 44	to be deleted
Char. 47	to read “Only varieties with pod parchment not entire: …”; state 1 to read “absent” and to move explanation that varieties with rudimentary suture string are considered as absent to Ad. 47
Char. 50	to delete “predominant”
Char. 52	to read “Only varieties with seed shape cylindrical; and type of starch grain: simple:…”
Char. 53	to read “Only varieties with seed type of starch grain: compound:…”
Char. 54	to provide example variety for state 3
Chars. 55, 56, 58	to read “Only varieties with plant anthocyanin coloration present: …”
Char. 60	to read as follows :

60. VS (+)	**Resistance to Fusarium oxysporum f. sp. pisi**		
QL	**Race 1**		
60.1	absent	Eden, Mammoth Melting Sugar	1
	present	Solara, Twinkle	9
60.2	**Race 5**		
	absent		1
	present		9
60.3	**Race 6**		
	absent		1
	present		9

Ad. 4	to add arrow to indicate fasciation
Ad. 14	to provide illustration as below, but with point of attachment indicated:
	 1 at middle to slightly towards base 2 moderately towards base 3 strongly towards base
Ad. 15	to add following illustration:
	- 26 – Ad. 15: Leaflet: dentation The maximum expression should be recorded; observations should only be made on the main stem (excluding aerial and basal branches), and above node six.  1 absent or very weak 3 weak 5 medium 7 strong 9 very strong
Ad. 17	to replace “1.” with “C”
Ad. 26	to read “Assessment should be made over all flowering nodes of each plant.”
Ad. 33	to replace illustrations with photographs
Ad. 37	to provide an illustration of a bract
Ad. 41	to add an illustration
Ad. 48	to add an explanation that the characteristic concerns the number of ovules and not the number of seeds
Ad. 52	to provide illustration (photograph)
Ad. 57	to explain colored / not colored in relation to tannin
TQ 9.3	to be deleted

63. The subgroup proposed that the Test Guidelines for Pea should be put forward for adoption by the Technical Committee in 2009 on the basis that there would be a partial revision for disease resistance characteristics in 2010.

Radish (revision) and Black Radish (revision)

64. The TWV noted that, at its forty-first session, the subgroup for Black radish had agreed to review whether to have separate Test Guidelines for *Raphanus sativus* L. var. *niger* (Mill.) S. Kerner / *Raphanus sativus* L. var. *longipinnatus* L.H. Bailey (RAPHA_SAT_NIG) and for *Raphanus sativus* L. *sativus* (RAPHA_SAT_SAT) on the basis of the following botanical classification:

RAPHA_SAT_NIG: edible part consists of thickened hypocotyl and upper part of taproot

RAPHA_SAT_SAT: edible part consists of thickened hypocotyl only

and/or the criteria used as the basis for the botanical classification by GRIN. That review was to be based on a ring-test with an exchange of plant material for a maximum of 10 varieties. The ring-test was to be coordinated by France and Germany and was to also involve China, Italy, Japan, Netherlands, Republic of Korea, South Africa, Spain and the United Kingdom.

65. The TWV received an oral report from Mr. François Boulineau (France) on the initial results of a ring-test. The TWV agreed that France and Germany should prepare a document containing the results of the completed ring test and a proposal for a possible set of characteristics to group radish varieties. It agreed that that document should be circulated by the end of October 2008.

66. The subgroups for the Test Guidelines for Radish and Black Radish discussed the following comparison table of characteristics in documents TG/64/7(proj.1) and TG/63/7(proj.2), as presented by Mrs. Swenja Tams (Germany), and commented as indicated below. The subgroups did not discuss the asterisks or example varieties. It was agreed that it would be necessary to state the time of observation for leaf and root characteristics.

TG/64/7(proj.1)	TG/63/7(proj. 2)	Subgroup comments
1.(*) **Ploidy** diploid 2 tetraploid 4	**1.(*)(+)MG C** **Ploidy QL** diploid 2 tetraploid 4	In accordance
2.(*) QL VG **Seedling: anthocyanin Coloration of hypocotyl** absent 1 present 9	**2.(*)VG QL** **(a) Seedling: anthocyanin coloration of hypocotyl** absent 1 present 9	In accordance
3. QN VG **Cotyledon: size** small 3 medium 5 large 7	**3. VG QN (a)** **Cotyledon: size** small 3 medium 5 large 7	In accordance, but to check whether different scales

4. QN VG **Foliage: width of attachment** narrow 3 medium 5 wide 7		to check whether to apply to all
	4. VG QN (b) **Foliage: number of fully developed leaves** few 3 medium 5 many 7	
5. QN VG **Leaf: attitude** erect 1 semi-erect 3 horizontal 5	**(*) VG QN (b)** **Leaf: attitude** erect 1 semi erect 3 horizontal 5	In accordance, but scales are different
6. (*) QN MG **Leaf: length** short 3 medium 5 long 7	**6. (*) MS QN (b)** **Leaf: length** short 3 medium 5 long 7	In accordance, but to check whether different scales
7. QN VG **Leaf blade: shape** narrow-obovate 1 obovate medium 3 broad-obovate 5	**7. (+) VG** **Leaf blade: shape** Narrow 3 Medium 5 Broad 7	In accordance
8. QN VG **Leaf blade: shape of apex** pointed 1 intermediate 2 rounded 3		to check whether to apply to all
9. QL (PQ) VG **Leaf blade: hue of green color** absent 1 yellowish 2 greyish 3	**8. (+) VGPQ (b)** **Leaf blade: color** green 1 yellowish green 2 greyish green 3	In accordance
10. (*) QN VG **Leaf blade: intensity of green color** light 3 medium 5 dark 7	**9.(+)VG QN (b)** **Leaf blade: intensity of color** light 3 medium 5 dark 7	In accordance
	10.(*)(+)VG QL (b) **Leaf blade: lobes (division to midrib)** absent 1 present 9	

11. (*) (+) QN MG **Leaf blade: number of lobes** very 1 few 3 medium 5 many 7	**11.(*)VG QN (b)** **Varieties with lobes divided to midrib only: Leaf blade: number of lobes (as for 10)** very few 1 few 3 medium 5 many 7 very many 9	harmonize
12. QL VG **Leaf blade: incisions of margin** absent 1 present 9		to check whether to apply to all
to check whether to add	**12. VG QN (b)** **Leaf blade: size of terminal lobe** small 3 medium 5 large 7	
13. QN VG **Leaf blade: depth of incisions of margin** shallow 3 medium 5 deep 2	**13. VG QN (b)** **Leaf blade: depth of incisions of margin** shallow 3 medium 5 deep 7	In accordance
14. QN VG **Leaf blade: pubescence** weak 3 medium 5 strong 7		proposed for deletion
15. (*) QL VG **Petiole: anthocyanin coloration** absent 1 present 9	**14. VG QL (b)** **Petiole: anthocyanin coloration** absent 1 present 9	In accordance, but should be: absent or very weak (1); weak (3); medium (5); strong (7); very strong (9)
16. QN VG **Petiole: intensity of anthocyanin coloration** weak 3 medium 5 strong 7		See above
	15. (*) MS/ VG QN (b) **Radish: length** very short 1 short 3 medium 5 long 7 very long 9	To check whether would be different scales
17. Root: thickness thin 3 medium 5 thick 7		Excluding Char. 21, state 1

		General : to change "Root" to "Radish" for subsequent characteristics
18. (+) QN VG **Root**: **width of root** thin 3 medium 5 thick 7	**16. MS/ VG QN (b)** **Radish: diameter** small 3 medium 5 large 7	To be harmonized and to check how to include bell-shaped types (e.g. width at broadest part)
19. (*) (+) PQ VG **Root**: **shape** transverse elliptic 1 circular 2 elliptic 3 obovate 4 broad rectangular 5 medium rectangular 6 narrow rectangular 7 narrow obtriangular 8 iciclical 9	**17. (*) (+) VG PQ (b)** **Radish: shape** transverse broad elliptic (1?) circular 2 elliptic 3 narrow elliptic 4 obovate 5 rectangular 6 obtriangular 7 narrow obtriangular 8 iciclical 9 ovate 10 bell shaped 11	To be harmonized and shapes to be presented in TGP/14 grid
	17a. (+) VG Radish: position of maximum diameter	to be deleted
	17b. (+) Radish: length in relation to diameter NL: **Ratio length/diameter**	to be deleted
	New 18. (+) VG QN (b) **Radish: position in soil** very shallow 1 shallow 3 medium 5 deep 7 very deep 9	to apply to all
20. QN, VG **Root**:**shape of crown (new: shoulder)** concave 1 plane 2 convex 3	**19. (+) VG PQ (b)** **Radish: shape of Crown** flat 1 rounded 2 conical 3	In accordance, to be harmonized
21. (*) (+) PQ QN VG **Root**: **shape of base** narrow acute 1 **or** medium acute 2 obtuse 3 rounded 4 flat 5	**20. (+) VG PQ (b)** **Radish: shape of base** narrow acute 1 acute 2 obtuse 3 rounded 4 flat 5	In accordance
22. (*) QL VG **Root: coloration of skin** one colored 1 bi-colored 2		to apply to all: to add "(excluding green shoulder)"

	21. (*) VG PQ (b) **Radish: color of skin** white 1 yellow 2 brown 3 pink 4 red 5 dark pink red 6 purple 7 violet 8 black 9	to apply to all and to check whether to reword to ground color /over color
23. (*) PQ VG **Root color of upper part** white 1 pink 2 red 3 violet 4		to be harmonized with TG/63 Char. 21: to add state "green"
	22. VG QN (b) **White Radish only: Radish: green color of shoulder** absent or very weak 1 weak 3 medium 5 strong 7 very strong 9	to reword to read "Only varieties with color of skin white: …"
	23. VG QL (b) **White radish varieties only: Radish: anthocyanin coloration** absent 1 present 9	to reword to read "Only varieties with color of skin white: …"
	24. VG QN (b) **Radish: ridging of surface** absent or very weak 1 weak 3 medium 5 strong 7 very strong 9	to check whether useful
27. Root color of flesh translucent white 1 opaque 2	**25. VG PQ (b)** **Radish: color of the flesh** translucent white 1 opaque 2 green 3 red 4	to check whether to delete state "red" and to add new characteristic for anthocyanin coloration
24. (*) PQ VG **Root: expression of red color of upper part** vermilion 1 scarlet 2 carmine 3		to check whether to be harmonized with black radish Char. 21: to check whether different states

25. (*) QN VG **Bi-colored radishes only: Root: extent of white tip** very small 1 small 3 medium 5 large 7 very large 9		to apply to all
26. QN VG **Root thickness of cortex** thin 3 medium 5 thick 7		proposed to be deleted
28. (*) QN VG **Time of harvest maturity** very early 1 early 3 medium 5 late 7 very late 9	**26. (*) (+) VG QN** **Time of harvest Maturity** early 3 medium 5 late 7	In accordance, but to check whether different scales To add (+) with explanation of maturity
29. (*) QN MG **Root: tendency to become pithy** absent or very weak 1 weak 3 medium 5 strong 7 very strong 9	**27. (+) VG C PQ (b)** **Radish: tendency to become pithy** absent or weak 1 medium 2 strong 3	In accordance, but to check whether different scales
		New Char. : Extension of secondary roots
		New Char. : Daylength types

*Sweet Potato (*document *TG/SWEETPOT(proj.3))*

67. The subgroup discussed document TG/SWEETPOT (*proj.3*), as presented by Ms. Heesook Hwang (Republic of Korea), and agreed the following:

Cover page	to replace “Patate dulce” with “Patate douce” for French; to add “Batata” for Spanish
1.	to read: “These Test Guidelines apply to all varieties of *Ipomea batatas* (L.) Lam.” , and to add the second sentence to read: “The characteristics in these Test Guidelines have been developed to distinguish between varieties used for tuber production, and additional characteristics may be needed in order to examine ornamental varieties.”
2.2	to read: “The material is to be supplied in the form of storage root of medium size of the variety or in the form of cutting.”
2.3	to read: “The minimum quantity of plant material, to be supplied by the applicant, should be: 50 storage roots or 150 cuttings.”

3.4.1	to read: “Each test should be designed to result in a total of at least 50 plants, which should be divided between at least three replicates.”; to consider the possibility of replacing “three replicates” by “two replicates”.
3.5	to read: “Unless otherwise indicated, all observations should be made on 30 plants or parts taken from each of 30 plants.”
4.2.2	the second sentence to read: “In the case of a sample size of 50 plants, 2 off-types are allowed.”
5.3	to be checked; normally grouping characteristics should be also included in Section 5 of Technical Questionnaires.
Char.1	to read: “Plant: growth habit” with the states of expression “upright (1), semi-upright (3) and spreading (5)”.
Char. 3	to read: “Stem: length of internode”; to delete (b)
Char. 4	to read: “Stem: diameter of internode”; to delete (b)
Char. 5	to be completed with states of expression; to receive explanation on main color in Chapter 8.2
Char. 6	to read: “Stem: anthocyanin coloration of internode”
Char. 7	to read: “Stem: anthocyanin coloration of tip”
Char. 8	to read: “Stem: anthocyanin coloration of node”
Char.9	to be indicated as “VG”; the leading expert to check whether there is any variety without pubescence and whether to apply 1 - 3 scale
Char. 10	the leading expert to check whether this characteristic can be combined with characteristic 15, whether the combined characteristic to be QL with the states of expression “absent (1), three lobes (2), five lobes (3), seven lobes (4), nine lobes (5)” or QN with the states of expression “absent or very few (1), few (3), medium (5) many (7) very many (9)”
Char. 11	to read: “Only varieties with leaf lobes absent: Leaf blade: shape”
Char.12	to read: “Only varieties with leaf lobes present: Leaf blade: overall shape”; states of expression to be provided
Char.13	to read: “Only varieties with leaf lobes present: Leaf blade: shape of base”; states of expression to be provided
Char.14	to read: “Only varieties with leaf lobes present: Leaf blade: depth of lobing”
Char.16	to read: “Leaf blade: anthocyanin coloration of upper side”
Char.17	to receive explanation on main color in Chapter 8.2
Char.18	the state of expression “very small” to be replaced with “absent or very small”; to check whether this characteristic is linked with characteristic 19
Chars.20 to 30	to be deleted as not being relevant for varieties for tuber production
Char.32	to receive explanation in Chapter 8.2, to indicate, in particular , the difference between “scattered (2)” and “all over the petiole (3)”
Chars. 34 and 35	to be deleted as not being relevant for varieties for tuber production

Char. 39	to check whether to read: “thickness of cortex relative to overall diameter”
Char. 40	to receive explanation on main color in Chapter 8.2, example varieties to be provided for all states of expression
Char. 41	to receive explanation on secondary color in Chapter 8.2, states of expressions with example varieties to be provided
Char. 42	to receive explanation on main color in Chapter 8.2
Char. 43	to be indicated as QN; to receive explanation on main color in Chapter 8.2
Char. 44	to be indicated as PQ; to receive explanation on secondary color in Chapter 8.2, example varieties to be provided for all states of expression
Char.45	to be completed with states of expression and, if required, with example varieties
Ad.11	to read: “Only varieties with leaf lobes absent: Leaf: shape”
TQ 5	the spelling of the example variety “Hayanmi” to be corrected

Taro (Colocasia Schott)

68. The subgroup discussed document TG/TARO(proj.2), as presented by Mr. Mitsuo Yuasa (Japan), and agreed the following:

Cover page	to insert “Taro” as alternative name for French
2.3	the minimum quantity to be 20 cormels
Char.2	to read: “Plant: growth habit” with the states of expression “upright (1), semi-upright (3), spreading (5)”
Char. 3	to delete “MS”
Char. 5	to read: “Leaf blade: absolute attitude”
Char. 10	the state of expression “round” to be replaced by “rounded”
Char. 13	to read: “Petiole: thickness at the height of sheath top”
Char. 14	to read: “Petiole: anthocyanin coloration” with the states of expression “absent (1), on upper part only (2), on lower part only (3), on whole petiole (4)”; to be indicated as QL VG; example varieties to be provided for state 1; to receive drawings in Chapter 8.2
Char. 16	to read: “Petiole: anthocyanin coloration of upper side”; to receive illustration in Chapter 8.2
Char. 17	to read: “Petiole: anthocyanin coloration of lower side”; to receive illustration in Chapter 8.2
Char. 18	to read: “Petiole: anthocyanin coloration of sheath”; to receive an example variety for state 1

Char. 19	To be split into the following two characteristics reading: "Corm: adherence of primary cormels to corm" with the states of expression "detachable from corm (1), non-detachable from corm (2) " indicated as QL; "Only varieties with primary cormels detachable from corm: Corm: arrangement of primary cormels" with the states of expression "sparsely budding (1), densely budding (2), clustered (3), indicated as PQ; these characteristics to be placed before characteristic 21
Char.23	to receive (+)
Char. 24	to read: "Corm: number of primary cormels"; to be placed after characteristic 21
Char. 25	to be indicated as VG
Char. 26	to read: "Primary cormel: number of secondary cormels" ; to be indicated as VG, to be placed before characteristic 25
Char. 27	to read: "Primary cormel: density of fibers on surface"; to receive 1-3 notes
Char. 28	to receive explanation in Chapter 8.2, to explain how to determine the time of harvest; to be indicated as QN MG
8.1	in the explanation of "Corm, primary cormel, secondary cormel" the word "third" to be replaced by "tertiary"
TQ title	the statement related to hybrid varieties to be deleted
TQ 4.2.2	to be deleted
TQ 7.3	the statement related to color photograph to be deleted

Tomato (Revision)

69. The subgroup discussed document TG/44/11(proj.1), as presented by Mr. Sergio Semon (European Community). It was noted that not all experts had prepared for a full revision of the Test Guidelines and that additional comments might result from further consideration of the draft. On that basis, the subgroup agreed the following:

Altern. names	to add alternative names from GENIE database
2.3 (b)	to read "vegetatively propagated varieties: 25 plants"
3.1	to delete "For vegetatively propagate varieties the duration of testing may be reduced to one growing cycle if the results on distinctness and uniformity are conclusive."
3.4.1	to read "…between two or more replicates."
3.5	to read "Unless otherwise indicated, all observations on single plants should be made on 18 plants or parts taken from each of 18 plants and any other observations made on all plants in the test."
5.3	to consider whether to add Char. 59 "Resistance to Tomato Spotted Wilt Virus - Race 0"

Char. 1	to be checked whether QL
Char. 3	to read "Only varieties with plant growth type determinate:…" and to be indicated as MG
Chars. 5, 6	to read "Only varieties with plant growth type indeterminate:…"
Char. 6	to be indicated as MG/MS
Char. 7	to add (+) and provide illustration
Char. 10	to add (+) and provide illustration; to be indicated as QL
Char. 17	state 2 to read "equally uniparous and multiparous"
Char. 19	state 1 to read "absent"
Char. 21	to be indicated as QL
Char. 22	to read "Only varieties with peduncle abscission layer present:…"
Char. 24	to have the states in reverse order and to read: very elongated (1); moderately elongated (3); medium (5); moderately compressed (7); very compressed (9).
Char. 25	in "proj.2" version to present the current characteristic alongside a new version with the same shapes presented in a grid in accordance with TGP/14 (ordered from broadest part at base to broadest part at apex / narrow to broad) and with ovate and obovate orientated according to the definition in TGP/14.
Char. 26	to add (+) and provide illustration (photographs)
Char. 27	to add (+) and provide illustration and to check whether varieties with an oval cross-section are considered to be "round"
Char. 30	to add (+) with explanation that the size of the scar is relative to the size of the fruit
Char. 32	to add (+) and provide illustration and explanation
Char. 33	to add "MG" and to add (+) and provide illustration and/or explanation of whether the thickness is absolute or relative to the size of fruit
Char. 34	to add "MG"
Chars. 35 to 38	to be moved before Char. 32
Char. 35	to add (+) and provide illustration and explanation of timing (if different from new note 8.1 (b)); to explain that the gene for green shoulder might not be clearly expressed in some conditions, which was why it was important to have the example variety "Daniela" to observe the expression of the characteristic
Chars. 36, 37, 38	to add example variety "Daniela" for the appropriate state
Char. 38	to add "(excluding green shoulder)"; and to add (+) with explanation of how to deal with green fruited varieties with green shoulder e.g. to explain that the shoulder should always be darker and that Chars. 37 & 38 have different scales
Chars. 39, 44	to add (+) with explanation of maturity and to add new state 1: green
Char. 40	to add new states: green (before state 1) and reddish violet (after state 5), with example varieties

new 1 (after Char. 40)	to consider whether to add new characteristic for stripes on fruit
new 2 (after Char. 40)	to read "Fruit: color of epidermis", with the states: colorless (1); yellow (2); and to add (+) with explanation
Char. 42	characteristic to be retained for further discussion and to add (+) with explanation
Char. 45	characteristic to be retained for further discussion
Char. 46	characteristic to be retained for further discussion and to add (+) with explanation
Chars. 47 to 61	to read as follows according to the nomenclature scheme agreed by the TWV at its forty-second session: 47. Resistance to *Meloidogyne incognita* (Mi) 48. Resistance to *Verticillium dahliae* (Vd) 49. Resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) 50. Resistance to *Fusarium oxysporum* f. sp. *radicis lycopersici* (For) 51. Resistance to *Fulvia fulva* (Ff) (ex *Cladosporium fulvum*) 52. Resistance to Tomato mosaic tobamovirus (ToMV) 53. Resistance to *Phytophthora infestans* (Pi) 54. Resistance to *Pyrenochaeta lycopersici* (Pl) 55. Resistance to *Stemphylium* spp. 56. Resistance to *Pseudomonas syringae* pv. tomato (Pst) 57. Resistance to *Ralstonia solanacearum* (Rs) 58. Resistance to Tomato yellow leaf curl begomovirus (TYLCV) 59. Resistance to Tomato spotted wilt tospovirus (TSWV) 60. Resistance to *Leveillula taurica* (Lt) 61. Resistance to *Oidium lycopersicum* (Ol) (now *Oidium neolycopersici*) (On))
Char. 47	to have the states: susceptible (1); moderately resistant (2) (example varieties: Vinchy, Madyta); highly resistant (3)
Char. 48	to check whether 3 states are needed
Chars. 49 etc.	explanations to be clarified to ensure that it is clear that the characteristics are qualitative
Char. 52	to delete (*) and add (*) for Char. 52.1
Char. 58	to be checked whether it is a quantitative characteristic, with different degrees of resistance
new (after Char. 61)	to check whether to add characteristic for resistance to Torado virus
new 8.1 (b)	to add a note for all relevant fruit characteristics to explain the appropriate timing and location on the plant for observations to be made
Ad. 6	to be reviewed
TQ 5	to consider the addition of Char. 59 "Resistance to Tomato Spotted Wilt Virus -

	Race 0”
TQ 6	to be provided
TQ 7.3.3	to be deleted

Yam

70. The subgroup discussed document TG/YAM(proj.2), as presented by Mr. Mitsuo Yuasa (Japan), and agreed the following:

Cover Page	to delete “*Dioscorea* L.” from the column for alternative names; to add “Japanese Yam” as the English name for *Dioscorea japonica* Thumb.
Char.1	to read: “Plant: density of foliage” with the states of expression “sparse (3), medium (5) and dense(7)”
Char.5	To split into the following three asterisked characteristics : Char.5 to read: “Tuber: shape in cross section (VG/QL)” with the states of expression “round (1), elliptic (2) and irregular (3)” with explanation in Chapter 8.2; Char.5a to read: “Only varieties with tuber: shape in cross section; round: Tuber: shape in longitudinal section (VG/PQ)” with the states of expression “very narrow rectangular (1), narrow rectangular (2), very narrow fusiform (3), narrow fusiform (4), round (5) and triangular (6) with drawings in grid in Chapter 8.2; Char.5b to read: “Only varieties with tuber: shape in cross section; elliptic: Tuber: shape in front view (VG/QL)” with the states of expression “triangular (1) and hand-shaped (2)”
Char.6	the states of expression to read: “yellow brown (1), light brown (2), medium brown (3) and dark brown (4), red (5), purple (6) and black (7); to provide example varieties for states (4) and (5)
Char. 8	state (3) to read “orange” and to receive an example variety
Char.9	to be indicated as QN; to receive explanation un Chapter 8.2
Char.10	to have states (1), (2), and (3)
Char. 14	to be merged with Char. 18 and to read: “Stem: aerial tubers” with the states of expression “absent or very few (1), few (3), medium (5), many (7), and to be indicated as MG
Char. 15	to read: “Aerial tuber: size”
Char.16	to be indicated as QL and to receive drawings in Chapter 8.2
Char.20	to replace “wide” with “broad”
Char.21	to be indicated as VG/MS
Char.26	to be indicated as MG and to receive explanation in Chapter 8.2
TQ 1	to include *Dioscorea alata* L., *Dioscorea polystachya* Turcz. and *Dioscorea japonica* Thunb.
TQ 4.2.1	to add “aerial tuber” after (a)

TQ 4.2.2	to be deleted
TQ 6	to receive a new example
TQ 7.3	to delete the reference to a representative color photograph

Proposals for Partial Revisions of Test Guidelines

Onion

71. The TWV considered document TWV/42/12.

72. The TWV agreed that Mr. Kees van Ettekoven (Netherlands) should organize an exchange of seed of potential example varieties for a possible new state 8 "purple" in characteristic 23 "Bulb/Bulblet: base color of dry skin" of the Test Guidelines for Onion, document TG/46/7. It was agreed that the Czech Republic, France, Italy, Netherlands, Republic of Korea, Spain and the United Kingdom would consider the varieties "Boradongi", with seed to be supplied by the Republic of Korea, and "Karmen", with seed to be supplied by the Czech Republic, in comparison to the existing example varieties "Brunswijker" and "Red Baron", to be provided by the Netherlands. The Netherlands would present the results of the exchange at the forty-fourth session of the TWV, in 2010.

Pumpkin

73. The TWV considered documents TWV/42/11 and TG/155/4 and agreed that the Test Guidelines for Pumpkin, document TG/155/4, should be modified as follows:

Char. 15	to delete example variety "Golden Hubbard" from state 11; to add state 12 "'Hubbard' type", with example varieties: Golden Hubbard, New England Blue Hubbard; and to add state 13 "tri lobed", with example variety: Tristar

Swede

74. The TWV considered documents TG/89/6 and TWV/42/8 and agreed that the Test Guidelines for Swede, document TG/89/6, should be modified as follows:

Char. 23	"Root: dry matter content": to be deleted			
New (Char. 23)	**23.**	**410-470**	**Flower: production of pollen**	
	(*)		absent	Tweed 1
	(+)		present	Magres 9
Ad. 23	to read "Examination should be made on fully opened flowers; tapping or shaking the flowering stem will release pollen, which, if present, can be observed on dark colored paper or card. The absence of pollen production is an indication of male sterility."			

Key to growth stages	to add: "Flowering 400 First flower open on terminal raceme 410 Few flowers are open on terminal raceme 420 Full flowering; lower siliques are elongating 450 Lower siliques are starting to fill, less than 5% of flower buds are not yet open 470 Seeds in lower siliques are enlarging, all buds have opened"
TQ 5	to add New Char. 23 "Flower: production of pollen"

Matters to be Resolved Concerning the Test Guidelines for Carrot

75. The TWV considered document TWV/42/9, as presented by Mr. François Boulineau (France).

76. The TWV agreed that Char. 11 of the Test Guidelines for Carrot, document TG/49/8, (corresponding to Char. 26 in document TG/49/8(proj.3)) should read as follows:

Char. 11	**Varieties scoring between 4 and 6 for characteristic 10 only:** **Root: tendency to conical shape**		
	very weak		1
	weak	Amsterdam 2	3
	medium	Nantaise améliorée 2, Nantaise améliorée 3	5
	strong	Giganta	7
	very strong		9
	to be indicated as QN, MS/VG, (b)		
Ad. 11	to read "The characteristic can be observed either visually or by using a formula. The density of carrot roots is relatively constant and, therefore, it is possible to use the following formula to determine the tendency to conical shape: shape coefficient = weight/(length x (3.14 x diameter^2/4) length: as for characteristic 7 diameter: as for characteristic 8 The formula above is the formula for calculating the density of a cylinder: therefore, assuming that the density of carrot roots is constant (i.e. 1), a high shape coefficient (close to 1) indicates roots with a cylindrical shape and a low shape coefficient indicates that the roots are tapered."		

77. The TWV agreed that Ad 31, 32 should read as follows:

Ad. 31, 32	Ad. 31: Plants: proportion of male sterile plants Ad. 32: Plant: type of male sterility Type of male sterility: Brown anther type: rudimentary brown anthers; Petaloid anther type: anthers transformed into petals with different shapes (e.g. bract-like, spoon-like)

78. The TWV noted that those amendments were being made in accordance with the request of the Technical Committee and that the Test Guidelines for Carrot, document TG/49/8, would be published once those amendments had been made.

UPOV Information Databases

79. The TWV considered document TWV/42/4 and received a report on the IACPT from Mr. Kees van Ettekoven. With regard to the Annex to document TWV/42/4, the TWV noted the request to provide comments on the additions and amendments therein, to the Office by August 30, 2008.

Variety Denominations

80. The TWV considered document TWV/42/5 and in particular the request of the TC to clarify the situation with regard to the Class 211 "Edible Mushrooms" in the "Explanatory Notes on Variety Denominations under the UPOV Convention", document UPOV/INF/12/1, Annex I, Part II "Classes encompassing more than one genus" (see Annex to document TWV/42/5). The TWV agreed that Class 211 should be modified to cover all species of *Agaricus*, *Agrocybe*, *Auricularia*, *Dictyophora*, *Flammulina*, *Ganoderma*, *Grifola*, *Hericium*, *Hypsizigus*, *Lentinula*, *Lepista*, *Lyophyllum*, *Meripilus*, *Mycoleptodonoides*, *Naematoloma Panellus*, *Pholiota*, *Pleurotus*, *Polyporus*, *Sparassis* and *Tricholoma*, in line with all other classes containing more than one genus. The TWV noted that Class 211 would not necessarily contain all edible mushrooms and may also cover some species for which there were no edible varieties. Therefore, it agreed that it would be appropriate to change the name of Class 211 to "Class 211 (Mushrooms)", rather than "Edible Mushrooms".

Project to Consider the Publication of Variety Descriptions

81. The TWV noted the report on developments provided in document TWV/42/6.

82. The TWV agreed that, following the adoption of the revised Test Guidelines for Pea, the TWV should discuss, at its forty-third session, whether the experts from France should conduct a survey amongst interested experts from UPOV members on the use of grouping, Technical Questionnaire and asterisked characteristics in pea.

Combinations of Lines or Varieties

83. The TWV noted the developments reported in document TWV/42/7.

Recommendations on Draft Test Guidelines

(a) Test Guidelines to be put forward for adoption by the Technical Committee

84. The TWV agreed that the following draft Test Guidelines should be sent to the TC for adoption at its forty-fifth session, to be held in Geneva in April 2009, on the basis of the following documents and the comments in this report:

Asparagus-bean / Yard-long-bean (*Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.)	TG/COWPEA(proj.2)
Cauliflower (Revision)	TG/45/7(proj.3)
Maize	TG/2/7(proj.3)
Pea	TG/7/10(proj.5)
Pumpkin (Partial revision)	TG/155/4
Swede *Brassica napus* L. var. *napobrassica* (L.) Rchb. (Partial revision)	TG/89/6
Taro (*Colocasia* Schott)	TG/TARO(proj.2)
Yam (*Dioscorea* L.)	TG/YAM(proj.2)

(b) Test Guidelines to be discussed at the forty-third session

85. The TWV agreed to re-discuss the following draft Test Guidelines at its forty-third session:

**Agaricus* L.
Black radish (revision) / Radish (revision)
Coriander (*Coriandrum sativum* L.)
*Dock (*Rumex* L.)
Globe Artichoke (*Cynara scolymus* L.) (Revision) with Cardoon
*Rosemary
*Sweet potato (*Ipomoea batatas* (L.) Lam.)
Tomato (revision)

86. The TWV agreed that it should start to establish or revise Test Guidelines for the following at its forty-third session:

Asparagus (revision)
Black salsify (revision) (*Scorzonera hispanica* L.)
*Lettuce (Partial revision: Bremia resistance)

* indicates possible "final" draft Test Guidelines

*Pea (Partial revision: disease resistance)
Shiitake (*Lentinula edodes*)

87. The leading experts, interested experts and timetables for the development of the Test Guidelines, are summarized in Annex IV. The TWV agreed that, for less well known species, it would be helpful for the Leading Expert to provide a brief introduction to the species at the start of the subgroup discussions.

Future Program, Date and Place of the Next Session

88. At the invitation of the expert from China, the TWV agreed to hold its forty-third session in Beijing, China, from April 20 to 24, 2009.

89. The TWV 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 reports by the participants)
   (b) Reports on developments within UPOV (oral report by the Office of the Union)
4. Molecular Techniques
   (a) Reports on developments within UPOV
   (b) Reports on work by members and observers
5. TGP documents
6. UPOV information databases
7. Variety denominations
8. Project to consider the publication of variety descriptions
9. Applications for varieties with low germination (Netherlands to prepare a document)
10. Nomenclature of pathogens (Netherlands to prepare a document)
11. Review of grouping, Technical Questionnaire and asterisked characteristics in the Test Guidelines for Pea
12. Proposals for Partial Revisions / Corrections of Test Guidelines
13. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee
14. Discussion on draft Test Guidelines
15. Recommendations on draft Test Guidelines
16. Date and place of the next session
17. Future program
18. Report of the session (if time permits)

19. Closing of the session.

90. The expert from Bulgaria invited the TWV to hold its forty-fourth session in Sofia, Bulgaria, in 2010.

Medal

91. Mr. Niall Green was awarded a UPOV bronze medal in recognition of his chairmanship of the TWV from 2006 to 2008.

Visits

92. On the afternoon of Wednesday, June 25, 2008, the TWV visited the Experimental Station for Cultivar Testing at Węgrzce, located 4 km north-west of Cracow, at an altitude of 285 m. A copy of the presentation introducing the technical visit is reproduced in Annex III to this report.

93. The TWV adopted this report at the close of the session.

[Annexes follow]

ANNEX I

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[Annex II follows]

ANNEX II

Slide 1

Slide 2

Agriculture in Poland (2007)

- Country's surface - 312,7 thousand km^2
- Total number of inhabitants - 38,1 Mio people
- Vegetation period - 250 days (on average)
- Precipitation - 550-600 mm (on average)
- Farmland acreage - 16,2 Mio ha
- Number of farms >1 ha - 1,8 Mio
- Average farm size - 7,8 ha

Slide 3

Farmland Structure (2007)

- **Arable land** - 73,3%
- **Grassland** - 15,4%
- **Pastures** - 4,8%
- **Orchards** - 2,0%
- Other - 4,3%

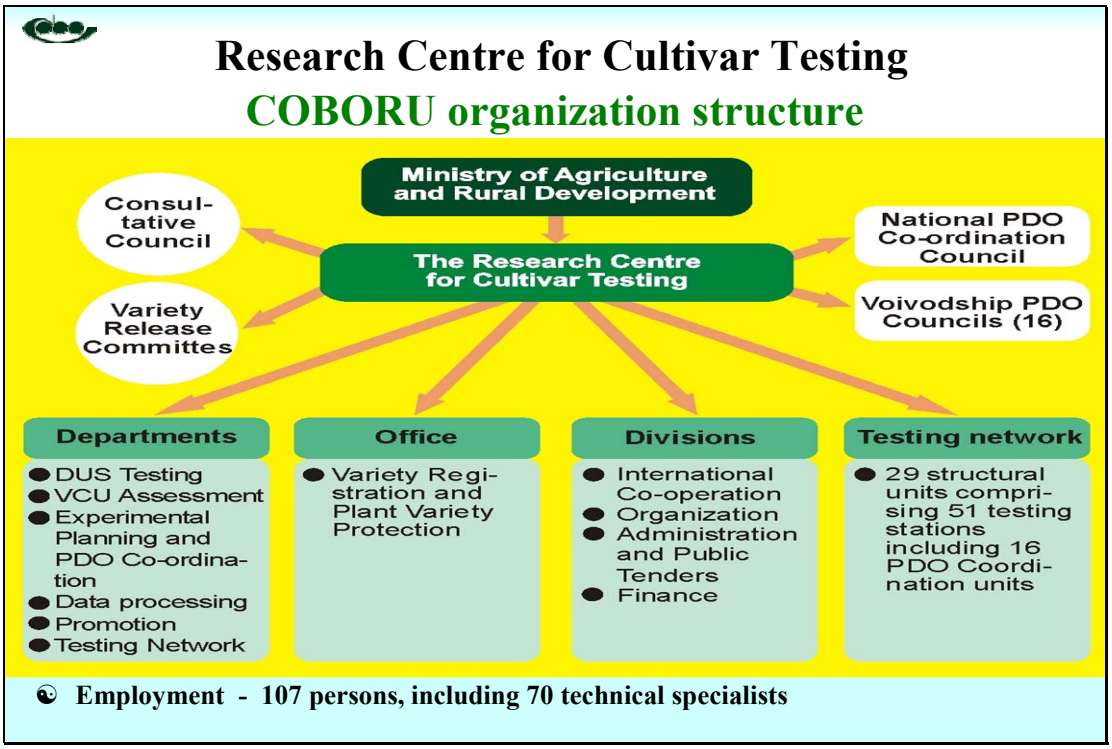
FARMLAND = 100%

Slide 4

Main crop cultivation in 2007

	Acreage in 1000 ha	Average yield in dt/ha
CEREALS (total)	**8353**	**32,5**
Winter wheat	1777	40,9
Spring wheat	335	31,5
Winter barley	173	38,2
Spring barley	1059	31,6
Winter rye	1316	23,7
Oat	583	25,1
Triticale (Winter and Spring)	1260	32,9
Cereals mixed for grain	1505	28,3
Maize (grain)	262	65,7
RAPE	**797**	**26,7**
POTATO	**570**	**207**
PULSE (for food)	**35**	**21,4**
PULSE (for feed)	**99**	**21,2**
SUGAR BEET	**247**	**513**
FIELD VEGETABLES	**217**	

Slide 5



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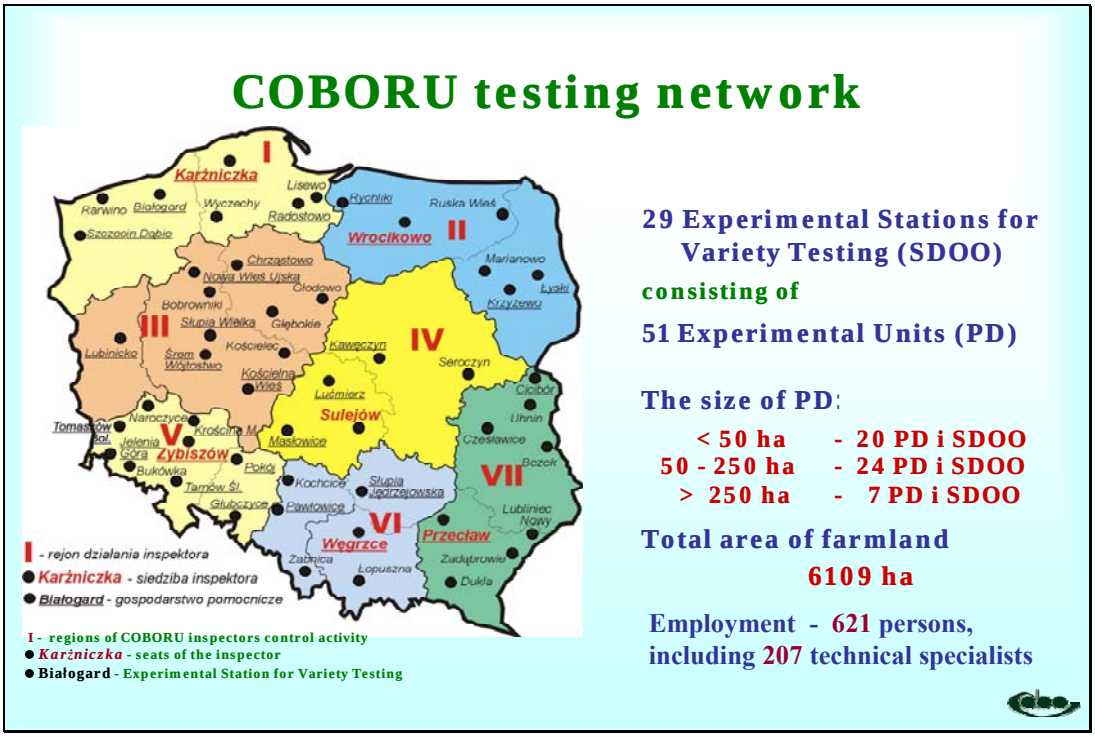

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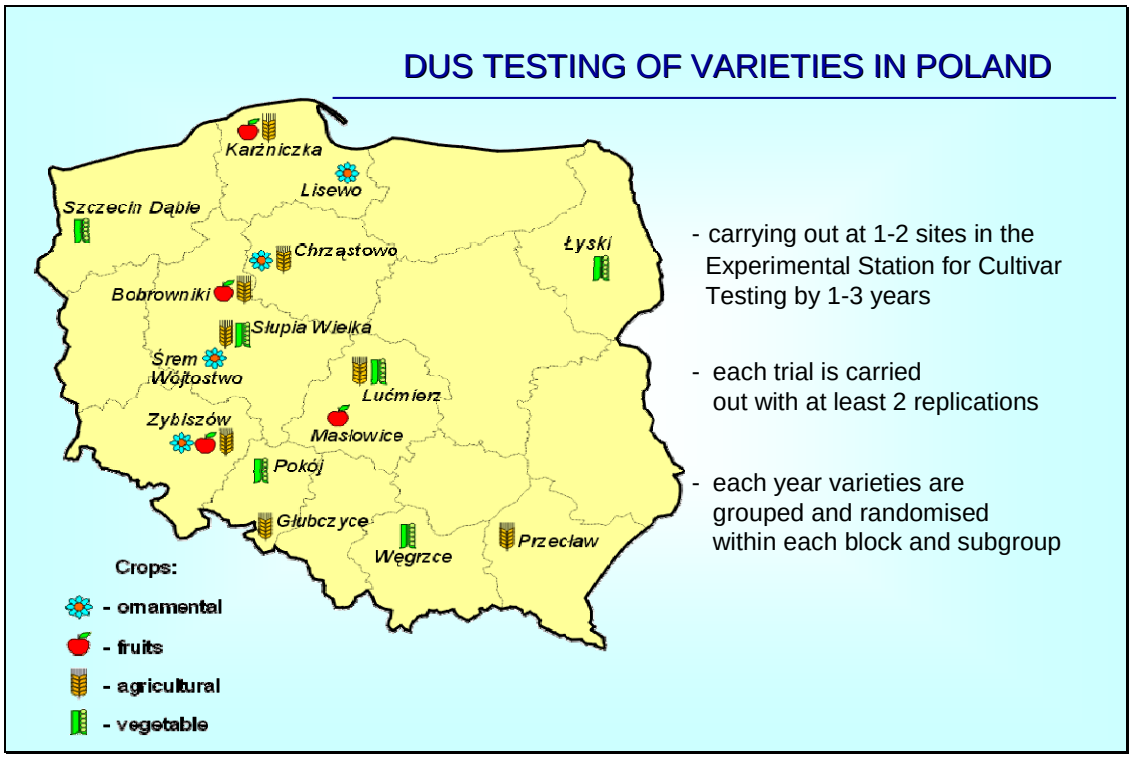


Slide 8

Legal basis of COBORU activities

National regulations

- **Seed Act (26.06.2003 r.)**
- **Variety Protection Act (26.06.2003 r.)**

The most important international regulations

- **Council Directive 2002/53/EC of 13 June 2002 on the common catalogue of varieties of agricultural plant species**
- **Council Directive 2002/55/EC of 13 June 2002 on the marketing of vegetable seed**
- **Commission Directive 2003/90/EC and 2003/91/EC of 6 October 2003 setting out implementing measures for the purposes of Article 7 of Council Directive 2002/53/EC and 2002/55/EC as regards the characteristics to be covered as a minimum by the examination and the minimum conditions for examining certain varieties of agricultural plant and vegetable species (with amendment)**
- **Commission Decision 2004/842/EC of 1 December, 2004 concerning implementing rules whereby Member States may authorize the placing on the market of seed belonging to varieties for which an application for entry in the national catalogue of varieties of agricultural plant species or vegetable species has been submitted**
- **Council Regulation (EC) No 2100/94 of 27 July 1994 on Community plant variety rights**
- **International Convention for Protection of New Varieties of Plants, of 2 December, 1961, as revised at Geneva on 10 November, 1972, on 23 October 1978 and 19 March, 1991**
- **UPOV Test Guidelines (TG)**
- **CPVO technical Protocols (TP)**
- **CPVO Guidelines on Article 63 of Council Regulation (EC) 2100/94 of 27 July, 1994 on Community Plant Variety Rights**

Slide 9

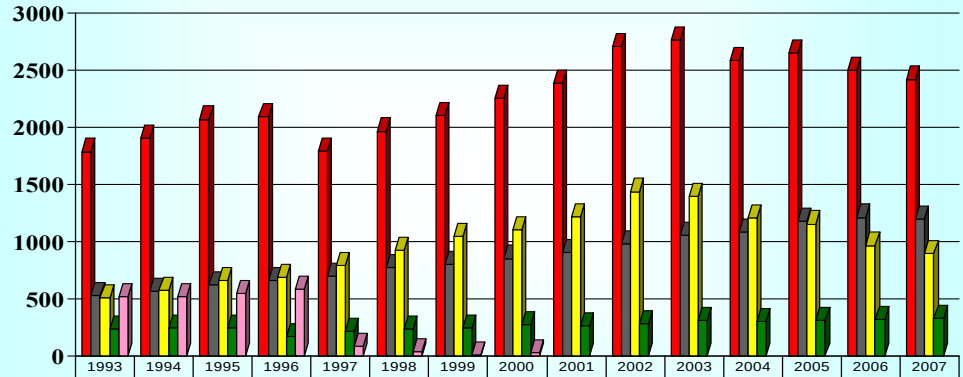
The main tasks of COBORU

- Maintaining the Polish National List of Varieties
- Maintaining the Register of Varieties Protected by Plant Breeders' Rights
- Authorization of the placing on the market seed belonging to varieties which an application for entry to the National Catalogue of Varieties
- Preparation of official descriptions of varieties included into the KR and/or KO
- Testing for distinctness, uniformity and stability of cultivars (DUS tests)
- Assessment of cultivars value for cultivation and use (VCU assessment)
- Development and co-ordination of The Post-registration Cultivar Testing system
- Preparation of guidelines and instructions for all testing activities
- Publishing of official information about varieties as well as performance results on varieties
- Post-control variety tests (for State Plant Health And Seed Inspection Service)
- Co-operation with European Council and Commission Organs as well as other Member States concerning variety registration and legal protection
- Co-operation with Community Plant Variety Office concerning granting Community Plant Breeders' Rights
- Co-operation with the International Union for the Protection of New Varieties of Plants concerning granting Plant Breeders' Rights

Slide 10

Polish National List of Varieties

Number of varieties admitted to The Polish National List of Varieties

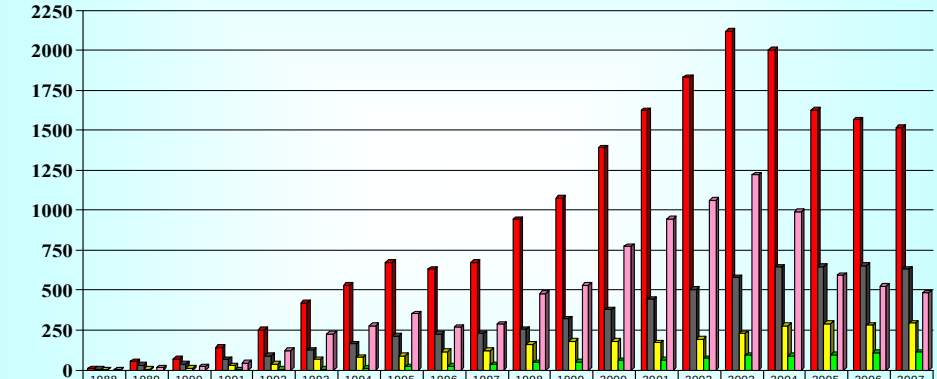


	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	1788	1906	2071	2094	1795	1967	2103	2252	2390	2708	2761	2589	2648	2499	2420
Agricultural	532	565	620	657	701	775	801	854	908	985	1060	1082	1179	1212	1196
Vegetable	506	578	660	687	792	922	1048	1102	1214	1439	1393	1206	1156	967	897
Fruit	234	248	244	166	214	236	244	272	267	284	308	301	313	320	327
Ornamental	516	515	547	584	88	34	10	24	-	-	-	-	-	-	-

Slide 11

Register of Varieties Protected by Plant Breeders' Rights

Number of varieties protected on the territory of Poland by the Plant Breeders' Right (PBR)



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	7	54	70	141	252	421	530	675	632	673	943	1077	1391	1626	1832	2122	2004	1628	1568	1519
Agricultural	4	32	37	65	89	125	163	213	226	228	255	321	378	445	504	579	646	649	654	630
Vegetable	2	6	13	29	37	65	80	88	114	123	162	181	179	170	194	228	277	291	281	295
Fruit	-	-	-	3	5	5	10	20	24	33	47	52	60	64	72	94	89	95	109	113
Ornamental	1	16	20	44	121	226	277	354	268	289	479	532	774	947	1062	1221	992	593	524	481

Slide 12

Integration of official Variety Testing System of Agricultural Species with Variety Recommendation in Poland

Application for NL in Poland	Application for NL in other UE-Member States
Official registration trials (DUS,VCU) in Poland (*2-3 years*)	Official registration trial (DUS,VCU) in other UE-Member States (*2-3 years*)
Entry of a variety in NL in Poland	Entry of a variety in NL in other UE-Member States
Entry into Common Catalogue of Agricultural Species	
Post-registration vriaty testing system (PDO) (*minimum 2 years*)	„Recognition trials" for varieties from CCA (*minimum 2 years*)
Entry in „List of varieties recommended for cultivation within the territory of the voivodeship"	Post-registration variety testing system (PDO) (*minimum 2 years*)
	Entry in „List of varieties recommended for cultivation within the territory of the voivodeship"

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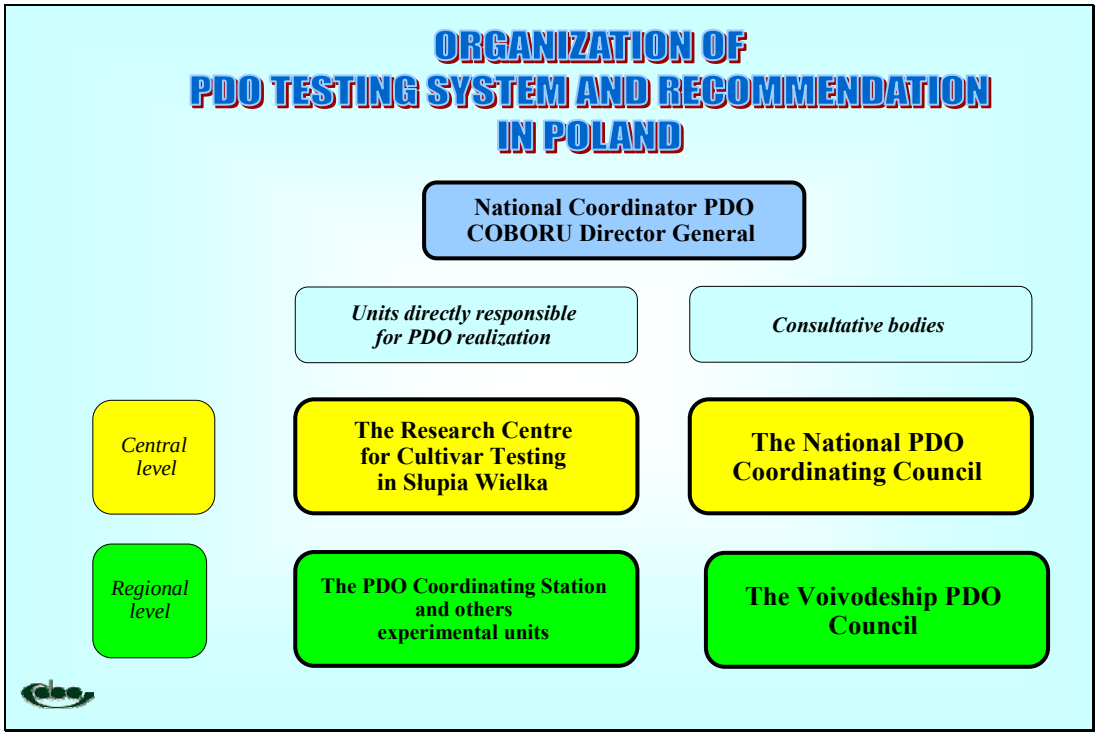

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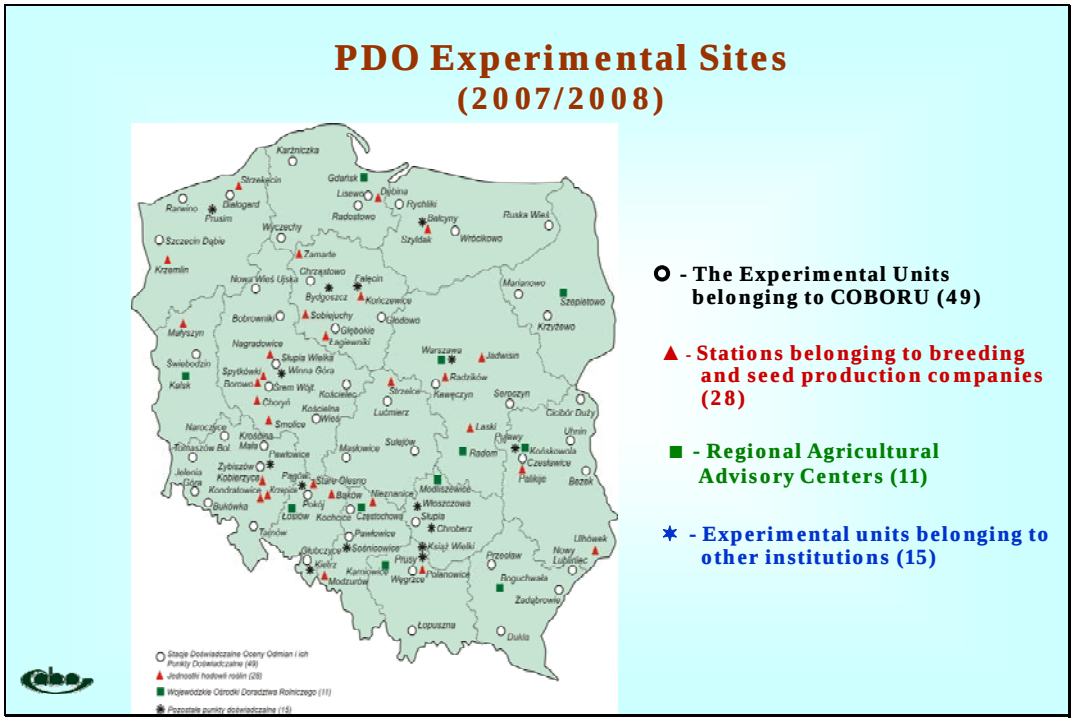

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List of varieties recommended for cultivation within the territory of the voivodeship in 2008

Voivodeship	Winter Wheat	Winter Barley	Winter Triticale	Winter Rye	Spring Wheat	Spring Barley	Oats	Spring Triticale	Winter Rape	Spring Rape	Potato	Field Pea	Total species
dolnośląskie	8	6	5	6	7	3	5		5		13		9
kujawsko-pomorskie	10	4	5	5	8	6	6	3	8	4	11	11	12
lubelskie	10	3	8	5	8	8			11				7
lubuskie	7		7	6	7	5	7						6
łódzkie	9		6		6	3	4				12		6
małopolskie	6				6	7	8				10		5
mazowieckie	8		4	6	7	5	4				11		7
opolskie	8	4	5	4	9	6	7		8		12		9
podkarpackie	8		4	6	7	6	5		7	2			8
podlaskie	5		5	6	8	4	4	2			11		8
pomorskie	5	4	5	5	5	5	4	2	7		12		10
śląskie	8	4	7	4	7	8	7		9		13		9
świętokrzyskie	7		6		6						7		4
warmińsko-mazurskie	8	4	7	4	5	6	4		5				8
wielkopolskie	9	4	5	7	5	6	5		5				8
zachodniopomorskie	8	3	3	4	5	6	5	2	8		12		10
Total number of varieties	26	7	12	18	19	16	15	5	23	4	24	11	
Total voivodeship	16	9	15	13	16	15	14	4	10	2	11	1	

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THANKS FOR YOUR ATTENTION

[Annex III follows]

ANNEX III

Slide 1

DUS testing of varieties in Poland

Julia Borys
The Research Centre for Cultivar Testing, Poland

Slide 2

THE RESEARCH CENTRE FOR CULTIVAR TESTING

The main task:

- maintaining of national list of varieties (NLI)
- maintaining of register of varieties protected by Plant Breeders' Rights (PBR)
- preparation of national guidelines for distinctness, uniformity and stability (DUS) testing based on the Community Plant Variety Office (CPVO) protocols and on the International Union for the Protection of New Varieties of Plants (UPOV) guidelines
- development of methods for value for cultivation and use assessment (VCU)
- carrying out of DUS tests as well as VCU assessment for the purpose of variety listing or granting of the plant breeders' rights
- granting of authorizations to place on the market of seed belonging to varieties accepted for official testing to a purpose of tests and trials
- carrying out of VCU assessment for varieties of vegetable and fruit plants, after their entering into the NLI, for descriptive lists purposes
- co-ordination and performance of post-registration variety testing and their recommendation
- publication of the Gazette for Plant Breeders' Rights and National List (Diariusz)
- publication of the Polish National List of Varieties of Agricultural and Vegetable Plants as well as the Polish National List of Varieties of Fruit Plants
- publication of variety descriptive lists and results of post-registration testing

Slide 3

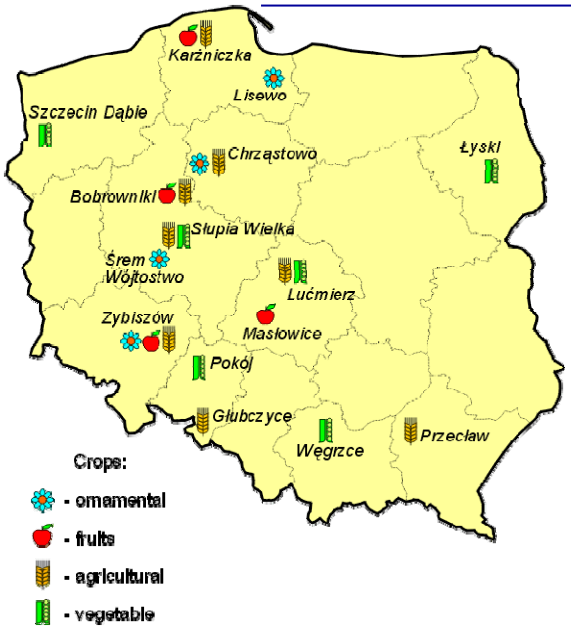
THE RESEARCH CENTRE FOR CULTIVAR TESTING

The main task:

- publication of lists of varieties recommended for cultivation on the territory of the voivodeship in co-operation with Voivodeship Self-governments and the Agricultural Chambers
- co-operation with variety listing authorities in EU member states and with the Community Plant Variety Office (CPVO)
- co-operation with organs of the International Union for the Protection of New Varieties of Plants (UPOV) in the field of DUS tests and implementation of UPOV Convention provisions on the Polish territory
- notification to the European Commission and UE member states of information on national listing of varieties
- co-operation with the State Health and Seed Inspection (PIORiN)
- co-operation with Voivodeship Self-governments and Agricultural Chambers in the field of post-registration variety testing and their recommendation
- co-operation with organizations and institutions in the field of plant breeding and seed production,

Slide 4

DUS TESTING OF VARIETIES IN POLAND



- carrying out at 1-2 sites in the Experimental Station for Cultivar Testing by 1-3 years
- each trial is carried out with at least 2 replications
- each year varieties are grouped and randomised within each block and subgroup

Slide 5

DUS TESTING OF VARIETIES IN POLAND

The group of plant	Number of species	The total number of varieties		Number of candidate varieties		Varieties tested for other countries	
		2007	2008	2007	2008	2007	2008
Agriculture plants	56	2725	2985	571	546	120	59
Vegetable plants	40	1862	1963	105	75	24	12
Ornamental plants	61	4189	4425	62	40	2	7
Fruit plants	38	1750	1757	62	57	20	20
TOTAL	**195**	**10 526**	**11 130**	**800**	**718**	**166**	**98**

Slide 6

DUS TESTING OF VEGETABLE IN POLAND

The DUS tests are carried out mainly in two Experimental Stations for Cultivar Testing for 2 years

40 species are tested in 2008 year

Slide 7

METHODS OF TESTING

Methodology of DUS testing according to:

- the CPVO protocols
- the UPOV guidelines

They are based on:

- field trials
- laboratory tests (resistance to pathogens, ploidy, electrophoresis, chemical analysis)

Slide 8

COOPERATION BETWEEN COUNTRIES

Cooperation with CPVO i UPOV

bilateral agreements :
The Czech Republic
Hungary
Slovakia

we do DUS tests for:

Latvia	*Norway*
Lithuania	*Colombia*
Estonia	*Slovenia*
Romania	*CPVO*

selling of reports:

Russia	*Israel*
Slovenia	*New Zealand*
Croatia	*CPVO*

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DIMENSIONS OF TESTING (1)

The group of plant	No. of species	The total number of varieties		Number of candidate varieties				Varieties tested for other countries	
		2007	2008	2007	2008		No. of species	2007	2008
in the open air									
Alliums	4	193	214	7	12	7	3	1	0
Cucurbits	5	154	145	16	14	5	3	1	1
Brassicas	6	271	304	11	2	1	1	3	2
Root Vegetables	4	268	262	11	8	3	3	6	4
Leaf Vegetables	6	126	184	10	5	4	2	0	0
Solanaceae	1	138	131	5	8	5	2	2	3
Cruciferous Root Vegetables	2	41	40	4	1	1	1	1	0
Edible Pulses	6	225	226	19	10	6	5	0	0
Sub-total	**36**	**1421**	**1506**	**83**	**60**	**32**	**20**	**14**	**10**

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DIMENSIONS OF TESTING (2)

The group of plant	No. of species	The total number of varieties		Number of candidate varieties				Varieties tested for other countries	
		2007	2008	2007	2008		No. of species	2007	2008
under cover									
Cucumber	1	124	137	9	3	1	1	0	0
Tomato	1	156	132	5	5	2	1	9	1
Sweet Pepper	1	137	144	6	5	1	1	1	1
Radish	1	44	44	2	2	1	1	0	0
Sub-total	**4**	**461**	**457**	**22**	**15**	**5**	**4**	**10**	**2**
TOTAL	**40**	**1862**	**1963**	**105**	**75**	**37**	**24**	**24**	**12**

Slide 11

THE DESCRIPTIVE LISTS OF VARIETIES

Value of cultivation and use (VCU) of listed vegetable varieties for the Descriptive Lists is tested in Poland

- White Cabbage
- Red Cabbage
- Cauliflower
- Brussels Sprouts
- Onion
- Leek
- Carrot
- Beetroot
- Parsley
- Celeriac
- French Bean
- Pea
- Cucumber
- Pepper
- Tomato

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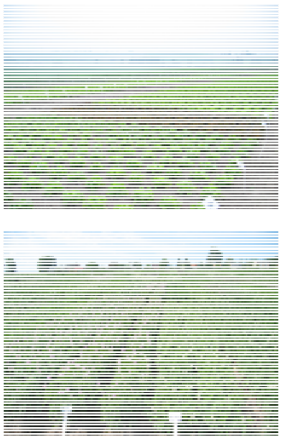
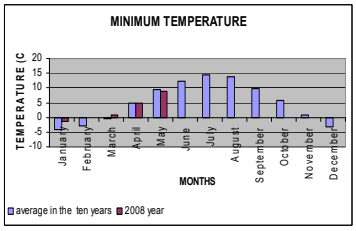
Slide 13

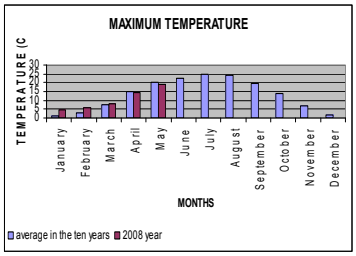
GENERAL INFORMATION

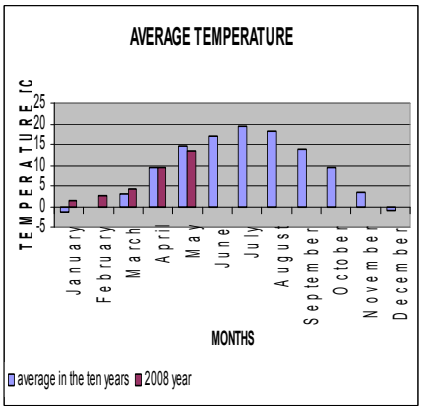


- established in 1952 year in Ściborzyce, relocated in 1956 year to Węgrzce
- location – 4 km north-west of Kraków, altitude 285 m
- annual mean temperature: **7.9^0 C**
- total annual precipitation: **650 mm**
- total area of SDOO – **99.23 ha** (including **83.47 ha** of arable land)
- area under trials: **15 ha**
- class of soil: I – IIIb, mainly IIb (good and very good wheat and beet soil quality)
- average employment: **25** employees, including **7** examiners of high professional qualifications.

Slide 14







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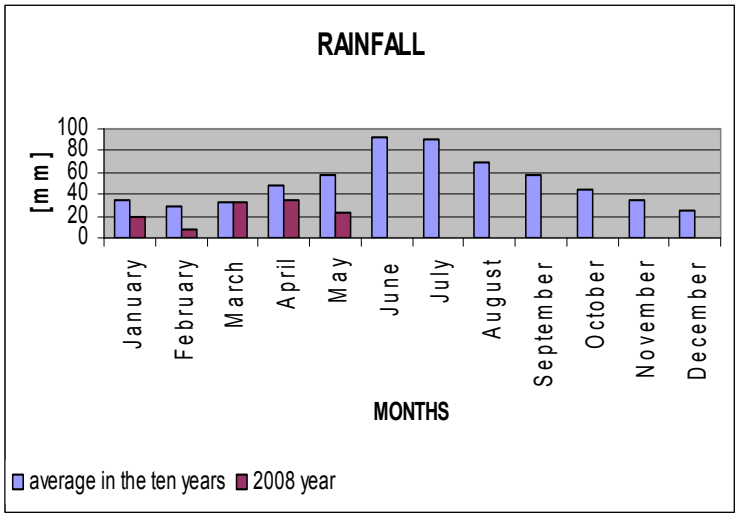

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THE TRIALS CARRIED OUT IN 2008 YEAR (1)

1. Distinctness, Uniformity and Stability (DUS) testing – 34 trials + 3 trials for other countries according bilateral agreements (20 species of vegetables in the open air)
2. Post-Control Tests – varietal identity and purity tests of seed material – 14 species; 109 seed samples (vegetables plants)
3. Value for Cultivation and Use (VCU) Trials – 18 trials with :
   - winter and spring cereals
   - Potato
   - Maize
   - Oilseed Rape (spring varieties)
   - Sugar Beet

Slide 17

THE TRIALS CARRIED OUT IN 2008 YEAR (2)

4. 5 trials for the Variety Descriptive Lists (LOO) of vegetable plants (Leek, Sweet Pepper, Dwarf French Bean)
5. Post-registration variety testing system (PDO) - 13 trials on central level (financed from budgetary sources):
   - winter and spring cereals
   - Fodder Beet
   - Field Bean
   - Potato
   - Maize
6. PDO - 1 trial on regional level with spring varieties of Barley (financed from non-budgetary sources)

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THE TRIALS CARRIED OUT IN 2008 YEAR (3)

7. PDO trials in other sites in Małopolska Voivodship (Little Poland Voivodship) - essential supervision
8. Meteorological garden
9. Trial with French Bean and Onion contracted by Breeding & Seed Station „Spójnia” Nochowo
10. 8 agro-technical trials contracted by chemical companies and the Agricultural University in Kraków

Slide 19

THE ADDITIONAL ACTIVITY OF THE FARM

The farm's activity is plant cultivation:

- Oilseed Rape (winter varieties) – 15.5 ha
- Wheat (winter varieties) – 15.4 ha
- Wheat (spring varieties) – 4.7 ha
- Barley (spring varieties) – 19.35 ha
- Oats – 7.45 ha
- Sugar Beet – 6 ha
- Potato – 0.6 ha

Slide 20

Distinctness, Uniformity and Stability (DUS):

- Onion
- Garlic
- Chive
- Leek
- Pumpkin
- Marrow
- Melon
- Watermelon
- Cucumber, Gherkin
- White Cabbage
- Beetroot
- Carrot
- Parsley
- Celeriac
- Lettuce
- Tomato
- French Bean
- Runner Bean
- Sugar Pea
- Wrinkled Pea

[Annex IV follows]

ANNEX IV

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE IN 2009

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

before August 8, 2008

Species	Basic Document(s)	Leading expert(s)	Interested experts (countries)
Asparagus-bean / Yard-long-bean (*Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.)	TG/COWPEA(proj.2)	Mitsuo Yuasa (JP), Kees van Ettekoven (NL)	BR, CN, FR, KE, KR, ZA, ISF[2], Office
Cauliflower (Revision)	TG/45/7(proj.3) and TWV/42/14	Francois Boulineau (FR)	CN, CZ, DE, ES, HU, IL, IT, JP, NL, PL, QZ, UA, ZA, ISF[2]
Maize	TG/2/7(proj.3)	TWA: Joel Guiard (FR) / Mr. Ferenc Kovàcs (HU); TWV: Zsuzsanna Füstös (HU)	BR, CN, CZ, DE, FR, IL, JP, KE, MX, NL, PL, QZ, SK, ZA, ISF[2]
Pea	TG/7/10(proj.5)	Niall Green (GB)	BR, CZ, DE, ES, FR, HU, JP, NL, PL, QZ, ZA, ISF[2]
Pumpkin (Partial revision)	TG/155/4 and TWV/42/11		
Swede *Brassica napus* L. var. *napobrassica* (L.) Rchb. (Partial revision)	TG/89/6 and TWV/42/8	Mr. Niall Green (GB)	AR, CA, CN, CZ, DE, FR, JP, KR, PL, QZ, RU, SE, UA, UY, ZA
Taro (*Colocasia* Schott)	TG/TARO(proj.2)	Mitsuo Yuasa (JP)	KE; ISF[2]
Yam (*Dioscorea* L.)	TG/YAM(proj.2)	Mitsuo Yuasa (JP)	KE, MX, ISF[2]

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWV/43
(* indicates possible final draft Test Guidelines)

New draft to be submitted to the Office of the Union
March 6, 2009

(Guideline date for Subgroup draft to be circulated by Leading Expert: January 9, 2009
Guideline date for comments to Leading Expert by Subgroup: February 6, 2009

Species	Basic Document	Leading expert(s)	Interested experts (State / Organization)[1]
**Agaricus* L.	TG/AGARIC(proj.2)	Sergio Semon (QZ)	ES, HU, JP, KR, NL, PL, ISF[2], Office
Asparagus (revision)	TG/130/3	Kees van Ettekoven (NL), Swenja Tams (DE)	ES, FR, IT, JP, QZ, UA, ISF[2], Office
Black radish (revision)	TG/63/7(proj.2)	Swenja Tams (DE)	CN, CZ, ES, FR, GB, IT, JP, KR, NL, PL, QZ, ISF[2], Office
Radish (revision)	TG/64/7(proj.1)	François Boulineau (FR)	CN, CZ, DE, ES, GB, HU, IT, JP, KR, NL, PL, QZ, ZA, ISF[2], Office
Black salsify (revision) (*Scorzonera hispanica* L.)	TG/116/3	Kees van Ettekoven (NL)	DE, FR, ISF[2], Office
Coriander (*Coriandrum sativum* L.)	TG/CORIA(proj.1)	Ricardo Zanatta Machado (BR)	DE, FR, HU, NL, PL, QZ, ZA, ISF[2] , Office
*Dock (*Rumex* L.)	TG/RUMEX (proj.3)	Nadiya Leschuk (UA)	CZ, HU, NL, PL, ISF[2] , Office
Globe Artichoke (*Cynara scolymus* L.) (Revision) with Cardoon	TG/184/3	Chrystelle Jouy (FR)	AR, DE, ES, IL, IT, NL, QZ, RU, ISF[2], Office
*Lettuce (Partial revision: Bremia resistance)	TG/13/10	François Boulineau (FR)	BR, CZ, DE, ES, IT, JP, NL, PL, QZ, UA, ZA, ISF[2], Office
*Pea (Partial revision: disease resistance)	TG/7/10	Niall Green (GB)	BR, CZ, DE, ES, FR, HU, JP, NL, PL, QZ, ZA, ISF[2]
*Rosemary	TG/ROSEMARY (proj.4)	Zsuzsanna Füstös (HU)	DE, FR, GB, NL, PL, QZ, ZA, ISF[2], Office
Shiitake (*Lentinula edodes*)	New	Mr. Niwa (JP)	QZ, HU, KR, UA, ISF, Office
*Sweet potato (*Ipomoea batatas* (L.) Lam.)	TG/SWEETPOT (proj.3)	TWA (KR)	BR, CN, JP, KE, MX, ZA, ISF, Office

[1] for name of experts, see List of Participants (Annex I)
[2] to be circulated to isf@worldseed.org and to the ISF representatives included in the List of Participants (Annex I)

Species	Basic Document	Leading expert(s)	Interested experts (State / Organization)[1]
Tomato (revision)	TG/44/11(proj.1)	Sergio Semon (QZ)	AZ, BG, BR, CA, CN, CZ, DE, ES, FR, HU, IL, IT, JP, KR, MD, NL, NZ, PL, PT, PY, RO, RU, SK, TN, UA, ZA, ISF[2], Office
Echinacea (to start in 2010)	New	Julia Borys (PL)	

[End of Annex IV and of document]