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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Thirty-Seventh Session
Nelspruit, South Africa, July 14 to 18, 2008

REPORT

adopted by the Technical Working Party for Agricultural Crops

1. The Technical Working Party for Agricultural Crops (TWA) held its thirty-seventh session in Nelspruit, South Africa, from July 14 to 18, 2008. The list of participants is reproduced in Annex I to this report.

2. The TWA was welcomed by Mr. Julian Jaftha, Director, Genetic Resources, Department of Agriculture. Mr. Jomo Mnisi, Chief Director: Professional Support, Department of Agriculture and Land Administration, Mpumalanga Province, gave a presentation on agriculture in Mpumalanga Province. A copy of the welcome address and of the presentation is included in Annex II to this document.

3. The session was opened by Mrs. Beate Rücker (Germany), Chairperson of the TWA, who welcomed the participants and, in particular, new participants to the TWA.

Adoption of the Agenda

4. The TWA adopted the agenda as reproduced in document TWA/37/1 Rev.

Short Reports on Developments in Plant Variety Protection

(a) Reports from members and observers

5. Ms. Noluthando Netnou Nkoana, Registrar of Plant Breeders' Rights made a presentation of the plant breeder's rights system of South Africa. Copy of her presentation is included in Annex III to this report.

6. The expert from Argentina reported that the number of applications for plant breeder's rights had increased in the recent past, especially for soybean and fruit varieties. He explained that Direction for the Register of Plant Varieties was divided in the following sections: vegetables, agricultural crops, for which he was responsible, fruit crops and ornamental crops. He added that plant breeder's rights were available to varieties of all plant genera and species.

7. The expert from Australia reported that in 2007 the Australian Plant Breeder's Right Office had accepted 343 new applications and that during the same period 196 plant breeder's rights had been granted. He explained that, compared to 2007, the number of applications accepted was similar; however, the number of plant breeder's rights granted had been much lower, which appeared to be due to the drought conditions in many regions of Australia over the previous several years, causing significant delays for some trials. He added that agricultural varieties accounted for 25% of the total number of applications in 2008, which was slightly lower compared to 2007 when the number was close to 30%. He reported that Australia still received a significant number of applications for the first variety of the species, most of which were native to Australia, and that Australia had started to provide UPOV codes in its data submitted to the UPOV-ROM plant variety database. He informed the TWA that the Australian Plant Breeder's Rights Office had recently obtained ISO 9001 quality management certification for its application and examination process.

8. The expert from Brazil explained that Brazil had been a UPOV Member bound by the 1978 Act of the UPOV Convention since 1998 and that plant breeder's rights could be granted for 77 plant genera and species, of which 26 were agricultural crops. He reported that 1,371 plant breeder's rights had been granted, of which 513 were soybean varieties. He added that a ring test to revise the national test guidelines for soybean had been carried out and that similar test were planned for cotton, pearl millet, wheat and rice. He reported that a meeting with soybean breeders to discuss the possible use of molecular markers in DUS examination had been held and a similar meeting with breeders of pearl millet was planned for 2008.

9. The expert from Bulgaria reported that the Executive Agency for Variety Testing, Field Inspection and Seed Control (EAVTFISC) was responsible for DUS examination and that there were 12 testing station for that purposes in his country and 14 testing stations for seed certification and post control. He added that around 280 DUS examinations were carried out in 2007, which represented an increase of 10% compared to 2006, and that agricultural crops were the most important crops in his country. He explained that in practice, there was a larger number of applications, and clarified that the national legislation permitted the use of descriptions from other members of the European Union as UPOV Members. He added that a DUS examination is carried out only if an application from the Patent Office was received. EAVTFISC was responsible not only for DUS examination but also for VCU testing and for registering varieties in the National Variety List. He finally reported that EAVTFISC carried out preliminary testing, post-registration testing and special testing (resistance to herbicide).

10. An expert from China reported that the seventh batch of the list of protectable plant genera and species had been implemented on June 1, 2008, raising the total number of protectable genera and species of plants by the Minister of Agriculture to 74. He added that, including the plant genera and species under the China State Forestry Administration, there

were more than 150 plant genera and species under the plant breeder's rights' system in China. He explained that the fee for an application for variety protection had been reduced in 2008 to 47% of the previous fee. At the moment, the application fee in China was 1000 RMB, the examination fee was 2500 RMB and there was no DUS testing fee, making a total cost per application of approximately 500 US dollars. He reported that the new application forms were used in accordance with the new implementing rules and that the old versions were no longer accepted. All applicants for PVP rights were required to use the new forms and submit electronic documents at the same time. The expert explained that the number of applications and plant breeder's rights granted had continued to increase: 4,998 applications in agricultural crops had been received by the PVP office by the end of May 2008. Among those applications, 213 were from foreign countries. In total 1,638 rights had been granted. For field plant applications, 4,507 applications had been received and 1,511 plant breeders rights had been granted. He added that, for China, a country with an enormous territory and an enormous population, the first priority was to resolve the stable food problem. He concluded by reporting that the TWV session would be held in Beijing in 2009.

11. An expert from the Czech Republic reported that the number of applications for national listing and for plant breeder's rights had been relatively stable during the last five years, with a total of around 500 applications for national listing and 100 applications for plant breeder's rights. She added that the fees for DUS and VCU tests had been modified and the new values would be applicable from the end of 2008. She added that the amendment of the Czech Act No 408/2000 Coll., on the Protection of Plant Variety Rights, had been adopted and would be published in the UPOV Gazette. She finally reported that the priorities for 2008 were a successful presidency of the European Community, for which 13 experts were preparing the work in a technical working group, and to establish a quality management system and achieve accreditation according to international standard ISO 9001.

12. The expert from Colombia reported that in Colombia 1,556 plant breeder's rights had been granted, 95% of which were for ornamental varieties.

13. The expert of the European Commission of the European Community reported that at January 1, 2007, the European Community comprised 27 members, in which territories the Community Plant Variety Rights granted by the Community Plant Variety Office (CPVO) were valid. He added that the Presidency of the European Union had been held by Slovenia from January to June 2008, was being held by France from July until December 2008 and would be held by Czech Republic from January to June 2009. He further reported that the European Union was in the process of an evaluation of the seed market sector with the aim of amending and possibly simplifying the seed regulation of the European Community in the frame of better regulation. He indicated that the procedure for the entitlement to file an application for a Community Plant Variety Right had been simplified and unified as from the beginning of 2008. The expert from the Community Plant Variety Office (CPVO) of the European Community reported that, in 2007, the 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 number of applications in the agricultural sector in 2007 increased by 20.5% to 732 applications with maize being the most important species, followed by wheat, potato, barley and oilseed rape. He added that an increase of applications for grass species had been observed. He reported that in 2006/2007 the CPVO coordinated a ring-test on wheat involving 7 member States of the European Community which was aimed at seeking harmonization in the assessment of uniformity. As a result of the ring-test and subsequent discussions in an expert group, the CPVO technical protocol for wheat had been revised with regard to the uniformity standard: for a limited period of three years (2007 –

2010) the uniformity standard in a sample size of 2,000 plants had been changed from a population standard of 0.1 % to a population standard of 0.3%. In respect of the six CPVO co-funded research and development (R&D) projects, he reported that the project "management of winter oilseed rape reference collection" had started in 2005 and the final report had been submitted in January 2008. The second project "construction of an integrated microsatellite and key morphological characteristic database of potato varieties on the EU Common Catalogue" continued during 2007 and final results were received by mid 2008. He added that, throughout 2007 and into 2008, the CPVO had taken part in the Multibeneficiary programme on the participation of Turkey, Croatia and the former Yugoslavian Republic of Macedonia in the CPVR system with a view to their possible future accession to the EU. In respect of international cooperation, he reported that the CPVO had signed a Memorandum of Understanding with Japan for the mutual recognition of technical reports in certain ornamental species, and had appointed the *Servicio Nacional de Inspección y Certificación de Semillas* (SNICS) from Mexico as the CPVO's official examination office for avocado varieties. He finally reported that the CPVO continued its close collaboration with the Office of the Union in relation to variety denomination issues, explaining that the CPVO compiles all the data on variety denominations from countries in the European Community, the European Economic Area (EEA) and Switzerland, whilst UPOV does this for the rest of the world.

14. The expert from Denmark explained that a reorganization had taken place since January 1, 2007, with the Department of Variety Testing having been changed from the Danish Institute of Agriculture Science (DIAS) to the Danish Plant Directorate and the Department of Variety Testing having been changed into the Division of Variety Testing. Since 2007, DUS examination and post control had been conducted at two separate testing stations, but from 2009, the number of testing stations would be reduced to one, which meant that DUS and post control would take place on the same testing station at Tystofte.

15. The expert from Finland reported that a new law on plant breeder's rights was under development, with the aim of developing legislation in closer conformity with the Finnish Constitution, however it would not imply big changes to the actual situation

16. An expert from Japan reported that, from 1978 until 2007, a total of 22,628 applications for plant breeder's rights had been filed and 16,962 titles had been granted. He added that in 2007, 1,533 applications had been filed, which represented an increase of 19% compared to 2006, with 577 (38% of the total) applications having been filed by foreign applicants. In respect of food crops, 1,144 applications had been filed, 939 plant breeder's rights had been granted and, during 2007, 88 applications has been filed, representing an increase of 80% compared to 2006. He explained that, for 2007, the average duration of the examination period, from filing the application until the granting of the plant breeder's right was 2.9 years, and that it was planned to reduce it to 2.5 years in 2008. He reported that it had been decided to harmonize 130 national test guidelines for which there was UPOV Test Guidelines, and explained that 61 had been done since April 2008, including one food crop: barley, and that other national test guidelines would be developed in the near future. He further reported that the first meeting of the East Asian Plant Variety Protection Forum would be held in Tokyo, from July 23 to 25, 2008. He concluded by reporting that a reorganization within the Ministry of Agriculture, Forestry and Fisheries of Japan was planned for August 2008, as part of which the Plant Variety Protection and Seeds Division would be changed into the Intellectual Property Division and the number of examiners would be increased.

17. The expert from Hungary reported that, in 2008, there were 1,054 applications, together with variety registration renewals, of which 741 were for agricultural crops. He added that the main agricultural crops were maize, with 126 new applications, sunflower, with 56, winter wheat with 46, sugar beat with 25, oilseed rape with 59 and soybean with 14. He explained that those figures represented an increase for maize, sunflower, soybean and oilseed rape, but represented a decrease for winter wheat and sugar beet. He further reported that Hungary had bilateral agreements with the neighboring countries for DUS examination of some agricultural crops; for example, Hungary carried our DUS examinations of sunflower for Poland, Czech Republic and Croatia and of soybean for Poland and the Czech Republic.

18. The expert from Kenya reported that there had been an increase in the number of species included in the national list, that the number of applications for plant breeder's rights had increased and that the Kenya Plant Health Inspectorate Service (KEPHIS) was working on capacity building in staff training and infrastructure. He added that in 2007, KEPHIS hosted a training course, organized by UPOV with the financial assistance of the Unites States Patent and Trademark Office. He also reported that the process for the revision of the plant breeder's rights law had been initiated with the aim of developing legislation in conformity with the 1991 Act of the UPOV Convention.

19. An expert from Poland reported that, in 2007, 2,420 varieties were registered in the national list, of which 1,196 corresponded to agricultural crops, 1,519 were protected by national plant breeder' rights, of which 630 corresponded to agricultural crops, 295 to vegetables species, 481 to ornamental species and 113 to fruit species. She added that, in 2008, 105 applications for plant breeder's rights had been filed. She further reported that in Poland, breeders maintained an interest for filing applications for national plant breeder's rights and also for Community plant breeder's rights.

20. An expert from the Republic of Korea reported that, since the implementation of the PVP system in 1998, the total number of applications for plant breeder's rights had reached 3,689, of which 2,347 varieties were registered and 316 had been rejected . He added that for National Listing, a total of 492 varieties in 5 major agricultural crops: rice, barley, soybean, corn and potato, had been registered. However, the article for national list had been revised to become an optional system, whereas it had been a mandatory system for designated species such as rice, barley, soybean, maize and potato. The revised law had been implemented from March 2008. He further reported that, according to the agreement made by TWV at it forty-first session held in Nairobi Kenya in June 2007, the Republic of Korea had carried out a ring-test of 13 radish varieties with seed samples from 6 countries and had sent a report of the result in May 2008 to the leading expert for the discussion on the forty-second session of the TWV, for discussion on the combination of the Test Guidelines for radish and black radish. He explained that the Republic of Koreas would host the twenty-sixth session of the TWC in Jeju, the Republic of Korea's southernmost island, from September 1 to 5, and that a 2-day workshop for data handling and electronic application systems would be held prior to the TWC session. All speakers for that workshop would be TWC participants and he invited TWA experts to attend the in TWC in the Republic of Korea. He indicated that a 4-week PVP and DUS training program from June 16 to July 12 had finished and that 17 participants from 13 countries had attended the program, various of which were from countries which had recently introduced plant breeder's right systems, were preparing national law or were trying to introduce it in the near future. He explained that the purpose of that program was to share their experience of plant breeder's right and DUS examination and that the program was supported fully by KOICA for all financial matters and would continue in 2009. He reported that the administration had won an appeal case in the patent court which had been initiated for

the rejection of an application for lack of uniformity in 2006. The variety was an interspecific cross between Chinese cabbage and turnip. The applicant had not accepted the decision made by the examiner and had applied to the appeal committee in MiMAFF, which confirmed the decision of rejection after examination by a committee composed of 3 members. The applicant appealed to the patent court in August 2007, and the patent court made judge penal for the examination, and finally they made the decision to reject in June 27, 2008. He indicated the this had been the first case to arrive at a patent court for a rejection made by PVP examiner.

21. An expert from Spain reported that, although since the establishment of the Community Plant Variety Office (CPVO) of the European Community, the number of applications for national plant breeder's rights had decreased, the number of applications for fruit varieties had increased. He added that applications for plant breeder's rights filed for fruit varieties during 2007 was double the number of the applications filed during 2006. He also reported that the eleventh session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular, would be held in Madrid, from September 16 to 18, 2008 for which 124 participants had registered.

22. The expert from the Netherlands reported that, as result of a recent reorganization, all DUS activities, including administrative activities of the Plant Variety Board, had been centralized in Naktuinbouw, with a policy of full cost recovery by means of the fees. He added that a cooperative training program on plant variety protection had been organized in June, and had been attended by participants of several observer States of UPOV. He further reported that a cooperative training program on plant variety protection with China and Indonesia had also recently started.

23. The expert from Ukraine reported that, on January, 19 2007, Ukraine had become a member of the 1991 Act of the UPOV Convention and on May 16, 2008, had become a member of the World Trade Organization (WTO). She added that the national list of Ukraine, the State Register Suitable for Dissemination, included 62 species and that 621 varieties were registered in 2007and 578 in 2008. The total number of varieties registered in the State Register Suitable for Dissemination in Ukraine up to 2008 was 4,957 varieties. She further reported that, in 2007, 767 applications for both national list and plant breeder's rights had been filed and that 555 plant breeder's rights had been granted.

24. An expert from the United Kingdom reported that applications for plant breeder's rights in the main agricultural species remained steady overall, or were slightly rising. Official DUS examination predominated in the major species, although some licensed examination was conducted, in particular for some minor species. He explained that DUS examination in the United Kingdom was conducted on the basis of full-cost-recovery for technical (not-policy) activities, through breeders' fees. UPOV Test Guidelines were adhered to and molecular markers were not used for DUS examination. He added that several species were tested through bilateral agreements with countries from the European Community, both for and by the United Kingdom and the appropriateness and opportunity for further bilateral agreements were being considered. He finally reported that support was provided to the CPVO in the development of agreed procedures for the award of community plant breeder's rights.

25. The representative from the Unites States of America explained that, in the United States of America, asexually reproduced plant varieties were protected by plant patents and seed propagated plant varieties and edible tubers were protected under the Plant Variety Protection Act. She explained that plant patents were administrated by the United States

Patent and Trademark Office. She reported that the number of plant patent applications had been stable in the past few years, ranging between 900 to 1,000 applications a year and that there was no backload in examination and issuance of plant patents at that moment. The Plant Variety Protection Act was administrated by the Plant Variety Protection Office (PVP Office), U. S. Department of Agriculture. The PVP Office had received between 350 to 400 applications a year in the past few years.

26. An expert from the United Republic of Tanzania reported that the country had introduced plant breeder's rights legislation (the Plant Breeder's Right Act) in 2002 and that granting of plant breeder's rights had started in 2005, with 34 applications having been filed and 18 rights granted. He added that the United Republic of Tanzania was in the process to initiate the procedure for accession to UPOV and that assistance from the Office of the Union had been requested for this purpose. He further reported that the main challenge was creating awareness amongst breeders and other interested parties about the plant breeder's rights system recently put into place and UPOV membership.

27. The expert from Zambia reported that Zambia was not member of UPOV but that a national law on plant breeder's rights had been enacted in 2007, which was in the process of being implemented.

28. The expert representing the International Seed Federation (ISF) and the European Seed Association (ESA) reported that enforcement and farm-saved seed were subjects of major concern for breeders. He also reported that, in Brussels in 2008, ESA had organized a seminar on enforcement of plant breeder's rights, which had focused on illegal reproduction of vegetatively propagated varieties and black market; it was attended by 125 participants and he reported that another seminar was planned for Spring 2009. He added that, in June, a workshop on royalty collection and farm-saved seed in potato had been organized in Poland. He further reported that an anti-infringement bureau had been created by several vegetable breeding companies. In addition, several potato breeding companies had set up a separate company to fight against illegal market of seed potato in Belgium, which could be extended to other countries in the future. It was explained that ESA was closely following the "Better regulation" initiative in the European Union, in particular in relation to DUS testing for variety listing and plant breeder's rights.

(b) Reports on developments within UPOV

29. The TWA received presentation from the Office of the Union on the latest developments within UPOV, a copy of which is attached as Annex IV to this document.

30. In relation to the OECD Technical Working Group on Varietal Purity and Varietal Identity (OECD Working Group), the expert from France noted that the characteristics used for identity could be different than the characteristics used for the examination of DUS. The Technical Director reported that that matter had been clarified at meetings of the OECD Working Group, in which UPOV had been invited to participate. He explained that the Office, after consultation with the Chairperson of the TWA, had noted to OECD that some characteristics which were not included in the UPOV Test Guidelines were proposed as characters for assessing purity. In such cases, it was suggested that it would be useful to consult with the relevant DUS experts on those characteristics, because the assessment of purity on characteristics which were not considered in the examination of distinctness, uniformity and stability could be problematic in some circumstances.

31. The representative of the European Seed Association (ESA) and the International Seed Federation (ISF) expressed his disappointment at the lack of enthusiasm for the development of a standardized electronic application system and encouraged members of the Union to reflect on the benefits of such an approach, including the prospect of an increase in the number of applications.

32. In response to a request by the representative of the European Seed Association and the International Seed Federation for the procedure for commenting on draft laws, the Technical Director clarified that, prior to the preliminary examination of laws by the Consultative Committee, the following approach will be taken:

(a) the Council document containing the law and its analysis will be posted on the Council section of the UPOV website (unrestricted area) and its posting will be notified to members and observers to the Council, with an invitation for comments;

(b) the comments received will be posted on the Consultative Committee section of the UPOV website (second restricted area).

Molecular Techniques

33. The TWA received a report on developments in UPOV concerning the use of molecular techniques, as set out in document TWA/37/2.

34. In response to a question from the Chairman of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT), the Technical Director reported that there had been no meeting of the *Ad hoc* Crop Subgroup on Molecular Techniques for Ryegrass (Crop Subgroup for Ryegrass) and that the Chairman of the Crop Subgroup for Ryegrass did not anticipate a need for a meeting in the near future.

35. With regard to the *Ad hoc* Crop Subgroup on Molecular Techniques for Potato, the representative of ESA reported that the Potato Section in ESA was discussing conformity thresholds in relation to essentially derived varieties for potato and would present the outcome of those discussions in due course, although it was not expected that any information would be available in time for reporting at the eleventh session of the BMT.

36. The TWA received a presentation from Mr. Joël Guiard (France) on a possible approach for the use of molecular techniques in DUS testing of maize, based on document BMT-TWA/Maize/2/11.

37. In response to questions that the use of a GAIA distance of 2 might result in varieties being excluded from the growing trial on the basis of very small morphological differences, Mr. Guiard recalled that, in the GAIA approach, weightings were only given for differences which represented a reliable and meaningful difference.

38. With respect to the Rogers 0.2 threshold for molecular distance, Mr. Guiard clarified that that threshold had been established to correspond to differences based on a global assessment of difference by experts.

39. In response to a question by an expert from Japan concerning isogenic lines, Mr. Guiard anticipated that the approach would result in all isogenic lines being included in the growing

trial, because the differences between isogenic lines would not exceed the threshold for exclusion from the growing trial.

40. The TWA agreed that the proposed approach for the use of molecular techniques in DUS testing of maize, based on document BMT-TWA/Maize/2/11, should be put forward for consideration by the *Ad hoc* Subgroup of Technical and Legal Experts of Biochemical and Molecular Techniques (BMT Review Group). It agreed that the principles underlying GAIA, including in particular the weighting of differences, and the use of a reliable number of markers for establishing molecular distance, should be explained in that proposal.

TGP Documents

41. The TWA considered the TGP documents below on the basis of documents TWA/37/3.

(a) New TGP documents:

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

42. The TWA commented on documents TGP/8/1 Draft 10 and the matters raised in document TWA/37/3, paragraph 16, as follows:

43. With regard to the invitation by the TC (document TWA/37/3, 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 TWA agreed that no such need existed for agricultural crops and noted that TGP/8/1 Draft 10: part II, Section 4.1.1.4.22 explained that the International Seed Testing Association (ISTA) “seedcalc” method could be used for calculating Type I and Type II errors.

44. In relation to document TWA/37/3, 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 TWA 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. In relation to the consideration of including statistical methods for very small sample sizes (document TWA/37/3, paragraph 16(c)), the TWA noted the TWF proposal that TGP/8 should contain an explanation that the observation of several parts of a plant (e.g. several fruits from a tree) did not increase the sample size for the purpose of uniformity, since the sample size was determined by the number of plants.

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

	PART I: DUS Trial Design and Data Analysis
1.5	The TWA agreed that the section should be checked for consistency with the requirements for distinctness and uniformity and should consider the number of plants in the plot.
1.6	to check spelling (e.g. last sentence of Section 1.6.1.7)
1.6.1.5	to clarify that different types of plots do not constitute replicated plots

1.6.3.4 to 1.6.3.6	to check whether this section is necessary for specific guidance on DUS testing
1.6.3.5	to provide guidance on optimal sub-block sizes (if kept)
	PART II: Techniques Used in DUS Examination
2.	Parent formula of hybrid varieties: The TWA agreed 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 TWA noted the TWV proposal 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. The TWA did not agree with that proposal and agreed that that was a matter for each authority to decide and noted that the parent lines might also be necessary for the examination of uniformity of the hybrid. It was noted that the parent formula would be necessary to avoid the possibility of a hybrid formed by the same parents, but in a reciprocal cross, being considered to be distinct.
New	The TWA agreed that Mr. Tanvir Hossain (Australia) should prepare guidance on relative tolerance limits for variances (F-test) for inclusion in document TGP/8. It agreed that a first draft should be prepared for consideration by the Technical Working Party on Automation and Computer Programs (TWC) at its twenty-sixth session.
	The TWA agreed that any further comments on TGP/8/1 Draft 10 should be sent to the Office of the Union by August 15, 2008.

TGP/11 Examination of Stability

47. The TWA considered document TGP/11/1 Draft 5 and the report on developments in the TC and CAJ concerning that document, as set out in documents TWA/37/3, and the comments of the TWF, TWO and TWV, as set out in document TWA/37/10.

48. The TWA noted that a previous draft of document TGP/11/1 contained a section on technical verification, which could be used for any document which was developed to consider matters of stability after the grant of a plant breeder's right. The TWA agreed that document TGP/11 should not consider matters other than stability, i.e. should not include novelty and distinctness.

TGP/12 Special Characteristics

49. The TWA considered document TGP/12/1 Draft 5 and the report on developments in the TC and CAJ concerning that document, as set out in documents TWA/37/3, and the comments of the TWF, TWO and TWV, as set out in document TWA/37/10.

50. The TWA made the following proposals concerning document TGP/12/1 Draft 5:

Title	to be amended to remove reference to "special" characteristics, e.g. to rename as "Characteristics based on a response to an external factor and characteristics for chemical constituents: protein electrophoresis"

	Section I
1.1.3	to write living organism in full throughout
2.2.6 (iii)	to read "[…] In such cases, cooperation in DUS examination is a means to overcome the problem (see the "Introduction" to document TGP/5 "Experience and Cooperation in DUS Testing").
2.3.2.2	to be amended to also refer to cross-pollinated varieties
2.3.2.3	to read "In some cross-pollinated species (e.g. Lucerne) disease resistance (e.g. resistance to *Colletotrichum trifolii*) is assessed as percentage of resistant plants within the population. In those cases a continuous range of variation could be observed across varieties. This can be treated as a true quantitative characteristic (1-9 scale) and appropriate statistical methods can be applied in the analysis of data."
3.1	to be deleted
3.3	to read "Example of resistance to *Therioaphis maculate* in Lucerne (UPOV Test Guidelines: TG/6/5). In some cross-pollinated species (eg. Lucerne) insect resistance (eg. *Therioaphis maculata)* is assessed as percentage of resistant plants within the population. In those case a continuous range of variation could be observed across varieties. This can be treated as a true quantitative characteristic.
	Section III
General:	to remove Section III: "Examination of characteristics using image analysis" from TGP/12 and include in document TGP/8, on the basis that it does not concern characteristics, but methods of examining characteristics
3.	for existing characteristics: to explain the need to compare the results of the characteristics examined by old method and by image analysis; for new characteristics: to provide guidance on the need to meet the requirements for a characteristic to be used for DUS, as set out in the General Introduction, and the need to check for independence from other characteristics

TGP/13 Guidance for New Types and Species

51. The TWA considered document TGP/13/1 Draft 12 and the report on developments in the TC and CAJ concerning that document, as set out in documents TWA/37/3, and the comments of the TWF, TWO and TWV, as set out in document TWA/37/10.

52. The TWA made the following proposals concerning document TGP/13/1 Draft 12:

2.4.2 (i), (ii)	to seek the views of the TC and CAJ concerning the explanation and the implication that a single plant selected from a population could be developed into a variety and protected without further crossing

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

53. The TWA considered documents TGP/14/1 Draft 6, TWA/37/3 Add. and TWV/41/10 Rev. and agreed the following with regard to document TGP/14/1 Draft 6:

Section 1	Technical Terms
	The TWA agreed to invite experts to send any comments or proposals for new terms to the Office of the Union
Section 2.	Subsection 2: I Shape
1.4	*Chart for Simple Symmetric Plane Shapes* In accordance with the explanation in Section 1.4, the terms used in the chart should not imply that they were restricted to the ratios indicated in the chart
1.5	to add "alate"
2.1	To be explained that it is necessary to avoid duplication of the same difference in two separate characteristics; in particular, to avoid the use of characteristics for length, width and ratio length/width; and length, width and shape, where the shape related to different length/width ratios
2.2	To amend the examples to avoid an implication that particular shapes would have particular notes (e.g. ovate (1); elliptic (2); obovate (3))
3.4	To make a cross-reference to Section 2.6 concerning the preference to use 2-dimensional shapes where possible
	Subsection 2: II Structure
2.1	To amend the examples to avoid an implication that particular growth types would have particular notes (e.g. upright (1); upright to spreading (2) spreading (3) etc.)
	Subsection 3: Color
	To include guidance on characteristics and states of expression for green color and, in particular, to avoid the creation of a separate characteristic for intensity of particular hues of green (c.f. draft Test Guidelines for Pea (document TG/7/10(proj.5): Chars. 7 and 8)
	The TWA agreed to invite experts to send any comments or proposals to the Office of the Union

(b) Revision of TGP Documents:

TGP/7 Development of Test Guidelines (documents TGP/7/1 and TWA/37/3)

54. The following comments were made with regard to document TGP/7/1:

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)* With regard to the possibility of providing a list of experts willing to provide guidance in the development of an authority's own guidelines in the absence of UPOV Test Guidelines, the Office of the Union explained that the list of experts

	would not be published in document TGP/7: the Office of the Union would identify appropriate experts on a case-by-case basis and provide the contact details of relevant experts from the list. The TWA noted the proposal of the TWV for consideration to 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 that respect it noted that any guidance would need to accommodate the different legal situations in different territories. It was agreed that it would be more appropriate to explain possible means of addressing such a situation, rather than making specific recommendations. The TWA agreed that it would be necessary to check whether the points raised by the TWPs should all be addressed in Section 1.2, or whether some of the issues should be dealt with under more relevant sections of TGP/7.

Section 2: Procedure for the Introduction and Revision of UPOV Test Guidelines	
2.1.6.2 etc.	The TWA 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 TWA 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 TWA agreed that the date for the submission of draft Test Guidelines to the Office of the Union (6 weeks before the TWP 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 TWP agenda. The TWA agreed that that approach should be followed from its 2009 session 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 TWA noted the importance of interested experts providing comments on the interim draft. The TWA 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 TWA session. However, in such cases, it would be necessary for a document to be provided to the Office of the Union at least 6 weeks before the meeting. The TWA noted that the Office would provide the interested experts by name on the TG webpage, rather than by country / organization. It agreed that each authority should identify a single expert responsible for commenting on the draft Test Guidelines, although other experts could be included on the list.

2.3.3	The TWA did not support the TWO proposal to consider the possibility for partial revision of asterisked characteristics by TC by correspondence. It agreed that Section 1.2 of TGP/7 should explain the flexibility for authorities to create new characteristics and to modify existing characteristics in response to new developments. The TWA agreed that consideration should be given to revising document TGP/5 Section 10: "Notification of Additional Characteristics" to cover the notification of new states of expression. In addition, the TWA did not agree that a new state of expression for a characteristic would always be a sufficient basis for undertaking a partial revision of Test Guidelines.

Annex 1: TG Template	
3.4	The TWA agreed that Chapter 3.4 should indicate the possible need for additional plants in some Test Guidelines in order to compensate for loss of plants 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 TWA 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 TWA agreed.
5.2, 5.3	*(to elaborate on the two uses of the grouping characteristics, i.e.* *"(a) <u>to select</u>, either individually or in combination with other such characteristics, <u>varieties of common knowledge that can be excluded from the growing trial</u> used for examination of distinctness"; and* *"(b) to organize the growing trial so that <u>similar varieties are grouped together</u>".* *[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 TWA agreed that TGP/7 and the Test Guidelines should make reference to TGP/4 and TGP/9 concerning the selection and use of grouping characteristics
6.3	*(<u>Quantitative characteristics</u>* *the Test Guidelines should explain the use of the 3, 5, 7 abbreviated notes in the 1-9 scale for quantitative characteristics.)* The TWA agreed that the Test Guidelines should explain the use of the 3, 5, 7

	abbreviated notes in the 1-9 scale for quantitative characteristics. It also agreed 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 TWA noted the TWV proposal 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. The TWA agreed that there was a need to avoid creating many possibilities for seed submissions to be deficient in quality.
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 TWA 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 TWA agreed.
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 TWA noted the proposal.
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 TWA agreed with the inclusion of this matter in TGP/7.
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 TWA 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 TWA noted the proposal.
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: doc. TWF/35/11, par. 55);* *(ii) for Test Guidelines for rootstock varieties which do not include flower or fruit characteristics (TWA: doc. TWA/33/16, par. 31);* *(iii) for Test Guidelines covering hybrids with species / genera which are covered by other Test Guidelines.)* The TWA agreed that the Office of the Union should prepare suitable drafts based on the explanations used in existing Test Guidelines.
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 TWA 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 TWA noted the 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 TWA 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 TWA noted the TWO proposal 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. The TWA agreed that any guidance should reflect the need for seed to be included in reference collections
GN 8	The TWA noted the TWV proposal that 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. The TWA agreed that it was important to

	consider the need to develop a robust variety description.
GN 11	see ASW 8
GN 19 (3)	*(Numbers* *requirement for numbers lower than 10 to be written and higher numbers to be indicated numerically to be deleted)* The TWA 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 TWA 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 TWA 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 TWA agreed that GN 20(3) should make reference to TGP/9 to explain the significance of the two-note difference when constructing quantitative characteristics, whilst clarifying that varieties with the same note might be considered to be distinct in a side-by-side comparison.
GN 20 (3)	*(Quantitative characteristics* *to provide guidance on the use of a scale with more than 9 notes.)* The TWA 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 TWA agreed.
GN 20 (4.4.1)	The TWA 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 TWA agreed that the expert from France should develop a document, based on GN 28, for discussion at the TWP sessions in 2009. It agreed that that document

	should consider the importance of regional sets of example varieties and should explain that example varieties are not necessary for all characteristics. The TWA agreed that a separate chapter on example varieties should be introduced in TGP/7.
GN 29	*(to consider the possibility of introducing a table of trade names associated with the denominations of the example varieties)* The TWA noted the discussions which had taken place in the other TWPs.
GN 32	to move "female parent" etc. under brackets and provide sufficient space for information to be written
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 TWA noted that it was possible for authorities to include non-UPOV TQ characteristics in their own Technical Questionnaire.

Annex 4: Collection of Approved Characteristics	
Introduction	The TWA noted that the Office of the Union planned to develop an improved TG Template and to integrate the Collection of Approved Characteristics into that template in a user-friendly package for drafters of Test Guidelines.

Discussion on Draft Test Guidelines

Buckwheat

55. The subgroup discussed document TG/FAGOP(proj.2) as presented by Mr. Masashi Noto (Japan), and agreed the following:

Altern. names	to add "*Fagopyrum sagittatum* Gilib."
3.4	to read "Each test should be designed to result in a total of at least 100 plants, which should be divided between at least 2 replicates."
5.3	to review for consistency with TQ characteristics
Char. 1	to be deleted
Char. 2	to read "Cotyledon: anthocyanin coloration" and to add state 1 "absent or very weak" (example variety "Aelita")
Char. 3	to be deleted
Char. 5	to be deleted

Char. 6	to read “Stem: length”
Chars. 6 to 9	to add note to explain that the observations should be made on the main stem
Char. 8	to have notes 1, 2, 3
Char. 9	to be indicated as 51; and to have the states: to have the states: absent or weak (1); medium (2); strong (3)
Char. 12	to have notes 1, 2, 3
Char. 14	to decide whether to describe base or whole shape and check terms with TGP/14 and to improve the illustration and provide example varieties (including Ukraine examples)
Char. 15	“51” to be deleted
Char. 16	to read “Flower: color”
Char. 18	to add (+) with explanation and to check whether VG and/or MS
Char. 19	to check whether to read “Inflorescence: number of flower clusters above upper node” and to amend illustration accordingly
Char. 20	example varieties to be provided by Germany
Char. 21	to add (+) with explanation that it is when 80% of seeds are at stage 89 (fully ripe) and to add stage 89 to Chapter 8.3
Chars. 22 to 26	to be indicated as 99 and to add stage 99 to Chapter 8.3
Char. 22	to check whether seed or fruit; state 3 to read “trullate”; and to add example variety “La Harpe” for state 4
Char. 25	to add example variety “La Harpe” for state 2
New	Plant: ploidy with the states diploid (2); tetraploid (4)
New (possible)	all interested experts to check the following characteristics for possible inclusion in the Table of Characteristics: Flower – shape of petals: (to add (+) and provide illustration) Flower – arrangement of petals to consider in relation to shape of petals); and to add (+) and provide illustration Anther – coloration to consider in relation to flower color Flower – size Flower – shape of nectarines Sprout - pattern of anthocyanin coloration distribution: Ukraine to check if useful for discrimination Nodes – intensity or development extent Nodes – degree of low nodes hairiness Axillary inflorescence – shape of cluster Terminal inflorescence – type (cluster, corymb, forked, umbel) - to add (+) and provide illustration (to check if the same as Char. 19) Plant – growth type (indeterminate, determinate) Fruit – length of peduncle Fruit - width of peduncle

	Fruit – shape of peduncle Plant – length of fruit formation zone to be checked if Char. 17: to add (+) and provide illustration Plant – length of branching zone: to add (+) and provide illustration Fruit – pattern on the perianth (absent – present) Fruit – pattern character on the perianth Fruit – shape of apex Fruit – coating
Ad. 15	to read “Time of flowering is when 10% of plants have at least one open flower.”

Flax, Linseed (Revision)

56. The subgroup discussed document TG/57/7(proj.2) as presented by Mr. Joël Guiard (France), and agreed the following:

3.4.1	to change “500” plants to “1,000” plants
3.5	to read “Unless otherwise indicated, all observations on single plants should be made on a total of 40 plants or parts taken from each of the 40 plants and any other observations made on all plants in the test.”
4.2.2	to read “[…] In the case of a sample size of 1,000 plants, 15 off-types are allowed.”
4.2.3	to read “[…] In the case of a sample size of 1,000 plants, 3 off-types are allowed.”
Char. 1	to be indicated as 55-61; state 3 to read “blue violet” and be moved after state 4; state 5 to be deleted; and to use some of the example varieties from Char. 8.
Char. 2	“61” to be deleted; “ (first flower open on 10% of plants)” to be deleted and to become Ad. 2; and to be indicated as MG
Char. 3	to read “Plant: natural height”
Chars. 3, 19, 20	to add note (a) with the illustration from Ad. 20 and illustration to be improved
Char. 4	to be indicated as VG
Chars. 5, 6, 7, 16, 17, 18	to indicate for group 2 and 3 varieties only (see Chapter 8.1)
Char. 7	to have the states: very compressed (1), moderately compressed (3); medium (5); moderately elongated (7); very elongated (9)
Char. 8	translations to be checked; state 3 to read “red violet”; state 5 to read “blue violet”; and state 7 to read “light blue”
Char. 9	to be deleted
Char. 10	to replace “round” with “circular” in states 1 and 2
Char. 11	to check whether the characteristic should apply to the color of the whole filament and review states 3 and 5 accordingly; and to check whether it is possible to discriminate between blue and violet
Chars. 12, 13	to add note (b) (currently note (a))

Char. 12	state 2 to read “pinkish”; and to add example variety for state 2
Char. 13	to review states 2 and 4 for colors other than at base; and example varieties to be provided
Chars. 16, 17	to be indicated as MS; to add (+) and provide illustration
Char. 16	to move “(at longest part)” to Ad. 16
Char. 17	to move “(at broadest part)” to Ad. 17
Char. 18	to have the states: very compressed (1), moderately elongated (3); medium (5); moderately compressed (7); very elongated (9) to have the states: very compressed (1), moderately compressed (3); medium (5); moderately elongated (7); very elongated (9)
Char. 19	example varieties to be provided; to replace “tall” with “long” for states 7 and 9
Char. 20	to read “Stem: length from cotyledon scar to top boll”
Char. 22	example variety to be provided for state 1
Char. 23	to read “Flower: shape of corolla”; to add (+) and provide illustration; and to replace “circle” with “circular” in states 1 and 2
Chars. 24, 25, 26	to check whether 9 notes would be appropriate and expert from United Kingdom to check correlation with 1000 seed weight and boll size
Char. 26	to have the states: very compressed (1), moderately elongated (3); medium (5); moderately compressed (7); very elongated (9) to have the states: very compressed (1), moderately compressed (3); medium (5); moderately elongated (7); very elongated (9)
Char. 27	to add (+) and Czech Republic to provide photograph; to have the states: absent or weak (1); medium (2); strong (3)
Chars. 28, 29, 30	tendency to be deleted, subject to checking of information on the characteristics by France; if kept, to have notes 1, 2, 3
Char. 31	change stage of development to 79-81
8.1 grouping	to use the following table:

<table>
<tr><th colspan="2">Char 19
Char. 22</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th></tr>
<tr><td>green</td><td>1</td><td colspan="3">?</td><td colspan="3">?</td><td colspan="3">?</td></tr>
<tr><td>yellow</td><td>2</td><td colspan="3">Group 1</td><td colspan="3">Group 1</td><td colspan="3">no varieties</td></tr>
<tr><td>brown</td><td>3</td><td colspan="3">Group 1</td><td>Group 1</td><td>Group 2</td><td>Group 3</td><td colspan="3">Group 3</td></tr>
</table>

Ad. 10	to delete illustration for state “absent”
Ad. 14	to replace photograph with illustration
Ad. 19	to clarify what needs to be “fully developed”
Ad. 20	illustration to become note (a) and to be amended to differentiate between soil level and cotyledon scar
8.3	to explain that the table applies to an individual plant and not a plot

Foxtail Millet

57. The subgroup discussed document TG/SETARIA(proj.2) as presented by Mr. Xianmin Diao (China), and agreed the following:

Cover page	The Spanish common name to read “Moha de Hungría” instead of “Mijo de Hungría”
2.2	to read: “2.2 The material is to be supplied in the form of seed and, if required by the competent authority, panicles with a sufficient number of viable seeds to establish a satisfactory row of plants for observation.
2.3.1	to become 2.3 and to read: “2.3 The minimum quantity of plant material, to be supplied by the applicant, should be: 0.5kg and 50 panicles (if required by the competent authority) The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant.”
2.3.2	to be deleted
2.5 and 2.6	To become 2.4 and 2.5 respectively
4.2.3	CN to check how many off-type plants to declare an aberrant row
5.3	to check Chars. 3, 24, 31, 33, 34, as grouping or consider removing those characteristics from TQ 5
Ch. 2	to read: “Seedling: anthocyanin coloration of leaf sheath” with same states of expression and to add (+) and to provide explanation and photographs
Ch. 3	to read: “Seedling: attitude of leaf blade”
Ch. 4	to have notes 3-5-7
Ch. 5	State 5 to read: “erect”

Ch. 6	to read: “Plant: anthocyanin coloration of leaf pedestal” and to check having absent/present only if not possible to distinguish between states 2 and 3
Ch. 9	to check if true QL and if correlated with Ch. 2 and 6
Ch. 10	to improve drawings and add explanation
C17	State 7 to read: “large”
Ch. 18	To have note 9 for state “present”
Ch. 19	to add (+) with explanation / illustration
Ch. 20	to read:” Plant: number of layers of brace roots”, state (1) to read: “absent or very few” and to check if reliable characteristic, if yes add (+) with explanation / illustration
Ch. 23	to add (+) and provide illustration
Ch. 24	to read: “Panicle: type of panicle” and to add note (a)
Ch. 25	to read: “Panicle: length of main stem panicle excluding peduncle” and to add drawing
Ch. 26	to read: “Panicle: diameter”
Ch. 27	to read: “Branched varieties excluded: Panicle: density”
Ch. 28	to read: “Panicle: number of grains on lateral branch”
Ch. 29 and 30	to be deleted
Ch. 32	to allocate notes to states as follows: “narrow elliptic”(1); “broad elliptic”(2) and “round”(3)
Ch. 34	to read: “Kernel: color (not polished)”
Ch. 35	to be indicated as PQ, add (+) with explanation , and to allocate notes to states as follows: “glutinous”(1); “intermediate”(2) and “non-glutinous”(3)
Ad. 8	to provide photo for state (1)
Ad. 12	to read: “Ad. 12: Anther: color The observation should be made early in the morning before the anther splits.”
Ad. 27	to read: “Ad. 27: Panicle: density of main stem panicle The density of the main stem panicle is the number of rachis per centimeter in the middle third of the panicle.”
Ad. 29 and 30	to be provided.

Hemp

58. The subgroup discussed document TG/CAN_SAT(proj.1) as presented by Mr. Henk Bonthuis (Netherlands), and agreed the following:

2.2	to read “The material is to be supplied in the form of seed or young plants of sufficient size and with sufficient development to express all the characteristics of the variety in the first growing cycle.”
2.3	to delete “(of commercial standard)”
2.3	to read “[…] In the case of seed propagated hybrid varieties where the parent formula is used for the examination of distinctness (see Chapter 4.1.1), an additional 200 grams of seed of each parental component should be submitted.
3.3.3	to delete “C”
3.4.1	to specify plant density
4.2	2nd paragraph to be reviewed
4.2 (a)	to read “The assessment of uniformity of seed-propagated, open-pollinated varieties should be according to the recommendations for cross pollinated varieties in the General Introduction.”
4.2 (c)	to check population standard
Table of Chars.	to add stage of development according to growth stage key to be provided in Chapter 8
	to add a note to all relevant characteristics that, for monoecious and dioecious varieties, male plants should be excluded from the observation
Chars. 1, 2	to check whether these characteristics need to be observed on greenhouse-grown plants and whether to be retained; to be indicated as QN; state 2 to read “medium elliptic”
Char. 2	to check whether 9 notes can be observed
Char. 3	to check whether true QL characteristic and, if not, to delete Char. 3 and add state 1 “absent or very weak” to Char. 4.
Chars. 3, 4	to explain which part of seedling is to be observed, to check whether these characteristics need to be observed on greenhouse-grown plants;
Char. 5	to read “Time of female flowering” and to check whether it should be explained as when 50% or 85% of plants have at least one female flower open
Char. 7	to read “Sex expression”; state 1 to read “monoecious; to check whether state 3 should read “gynoecious”. To check whether to accept 5% or 10% male plants in monoeciuos varieties.
Char. 8	to check whether the characteristic is reliable; to be observed at full flowering; to have the states: none or very few (1); medium (2); many (3)
Char. 9	to read “Stem: length of internodes”
Char. 10	to be indicated as MS/VG and to have notes 1, 2, 3
Char. 11	to add (+) and provide illustration

Char. 13	to read “Leaf: number of leaflets”; to add (+) with explanation; and to check whether 9 notes can be observed
Char. 16	to check whether 9 notes can be observed
Char. 17	to be deleted
Char. 18	to read “Leaf: anthocyanin coloration”; state 1 to read “absent or very weak”
Char. 19	to be deleted
Char. 20	to read “Petiole: anthocyanin coloration”; state 1 to read “absent or very weak”; to check whether reliable characteristic
Char. 22	to read “Plant: natural height”; to check whether to add indication of VG or MG
Char. 23	to be indicated as VG; state 4 to read “medium green”
Char. 24	to be deleted
Char. 25	to read “Seed: weight”; to be indicated as MG; to have the states: very low (1); low (2); medium (3); high (4); very high (5)
Char. 26	to replace states 3 and 4 with colors (e.g. light brown/grey brown; brownish yellow/yellowish brown)
Char. 27	to add (+) and provide illustration; to check whether 9 notes can be observed
Char. 28	to add (+) and provide illustration; to have only 3 states
New Chars.	interested experts to provide Leading Expert with proposed new characteristics by August 15, 2008. Leading Expert to circulate all proposed new characteristics by September 15, 2008. Experts proposing the new characteristics should indicate the discriminating power of each characteristic.
8.1 (a)	to replace with stage of development

Maize (Revision)

59. The subgroup discussed documents TG/2/7(proj.3) and TWA/37/11, as presented by Mr. Joël Guiard (France), and agreed the following:

General	to replace “open pollinated” with “open-pollinated”
	to check French translation of characteristics
Table of contents	to add 6.5
6.5	to add “PC: popcorn variety” and to indicate “(PC)” for relevant varieties in the Table of Characteristics, i.e. Char. 36 (state 2) and Char. 38 (all example varieties)
Table of Chars.	to check spelling of “Mv. Aranyanos (SC)” throughout (e.g. Chars. 12, 14)
Char. 2	to replace “tip” with “apex” and to replace “round” with “rounded”. Note “3” to be added. State 5 to be retained.
Char. 4	to have the states: absent or very weak (1); intermediate (2); strong (3)

Char. 6	no change
Char. 7	no change
Char. 10	to add (+) and add reference to Ad.10 in Ad.9
Char. 13	no change
Char. 14	no change
Char. 18	state 3 to read “moderately lax”; state 5 to read “moderately dense”
Chars. 24.1, 24.2, 25	“(tassel included)” to be moved to become Ad. 24.1, 24.2, 25
Char. 24.1	to read “Only inbred lines and varieties with ear type of grain: sweet or pop: …”; “(tassel included)” to be moved to Ad. 24.1
Char. 24.2	to read “Only hybrids and open-pollinated varieties, excluding varieties with ear type of grain: sweet or pop: …”; “(tassel included)” to be moved to Ad. 24.2
Char. 26	no change
Char. 32	to read “Only varieties with ear type of grain: sweet or waxy: …”; to add (+) and provide illustration; waxy type example varieties to be provided for state 2 by Republic of Korea; to add state 3 “three”, with example variety “Woody corn”
Chars. 33, 34, 35, 37	to read “Only varieties with ear type of grain: sweet: …”
Char. 36	to add state “waxy-sweet”, subject to explanation being provided by Republic of Korea
Char. 38	to read “Only varieties with ear type of grain: pop: …”; to be moved after Char. 40
Char. 39	to delete “main”; to add example variety “Pure white (SC)” for state 1; example varieties to be provided by Bulgaria (state 8) and Republic of Korea (state 10)
Char. 40	to read “Excluding varieties with ear type of grain: sweet: Ear: color of dorsal side of grain”
8.1 (e)	to provide explanation or reference for “Xenia effect”
Ad. 21, 22	to combine into single photograph with arrows positioned outside photograph
Ad. 36	photograph for state 8 to be provided by Republic of Korea; photographs for “Iodine staining test” to be enlarged and to replace “9 other types of grain” with “non-waxy”
Ad. 38	to provide illustration without plastic bag
Decimal Code	to correct spelling of “exCepté” in French version
TQ 1	no change
TQ 4.2	to move “female parent line” etc below brackets and to provide sufficient space for information to be provided
TQ 6	to be amended
Annex	to replace “electrophoresis” with “isozyme polymorphism” throughout
Chars. 42	to be indicated as QL

to 48, 50, 52 to 54	
Char. 42	to replace “Genotype 0.5/1” with “Genotype 0.5/6”
Char. 43	to add “Genotype 3.5/4.5”
Char. 47	to check whether state 7 should be included in state 4
Chars. 49.1, 49.2	to be indicated as PQ and to add the table below
Chars. 51.1, 51.2	to be indicated as PQ and to add the table below
Part III 1.	to replace “at least 4 coleoptiles” with “at least 20 coleoptiles”
6.7.2	illustration to be corrected
6.8.2	tables to be replaced (see Chars. 49 and 51)
	example varieties to be provided
Annex	to be checked

6.6.3 Distinctness table for the different states of expression at the locus Acp1

ACP1		2/2	2/3	3/3	4/6	4/4	6/6	2/4	2/6	3/4	3/6
	Note	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2/2	**1**	-	-	+	+	+	+	+	+	+	+
2/3	**2**	-	-	-	+	+	+	+	+	+	+
3/3	**3**	+	-	-	+	+	+	+	+	+	+
4/6	**4**	+	+	+	-	-	-	+	+	+	+
4/4	**5**	+	+	+	-	-	+	+	+	+	+
6/6	**6**	+	+	+	-	+	-	+	+	+	+
2/4	**7**	+	+	+	+	+	+	-	+	+	+
2/6	**8**	+	+	+	+	+	+	+	-	+	+
3/4	**9**	+	+	+	+	+	+	+	+	-	+
3/6	**10**	+	+	+	+	+	+	+	+	+	-

Combinations indicated with “+”can be clearly separated. In general, combinations indicated with “-“cannot be separated.

The notes within grey zones should not be used without knowledge of the parent formula.

6.4.3 Distinctness table for the different states of expression at the loci Pgm1 + Pgm2

PGM1			9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9	16/16	16/16	16/16	16/16	16/16	5/5
	PGM2		1/1	1/3	3/3	3/4	4/4	1/4	8/8	3/8	4/8	1/8	1/1	1/3	3/3	4/4	8/8	3/3
		Note	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
9/9	1/1	**1**	-	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+
9/9	1/3	**2**	-	-	-	+	+	-	+	+	+	+	+	+	+	+	+	+
9/9	3/3	**3**	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+
9/9	3/4	**4**	+	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+
9/9	4/4	**5**	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+	+
9/9	1/4	**6**	-	-	+	+	-	-	+	+	+	+	+	+	+	+	+	+
9/9	8/8	**7**	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+
9/9	3/8	**8**	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+
9/9	4/8	**9**	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+
9/9	1/8	**10**	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+
16/16	1/1	**11**	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+
16/16	1/3	**12**	+	+	+	+	+	+	+	+	+	+	-	-	-	+	+	+
16/16	3/3	**13**	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+
16/16	4/4	**14**	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+
16/16	8/8	**15**	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+
5/5	3/3	**16**	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-

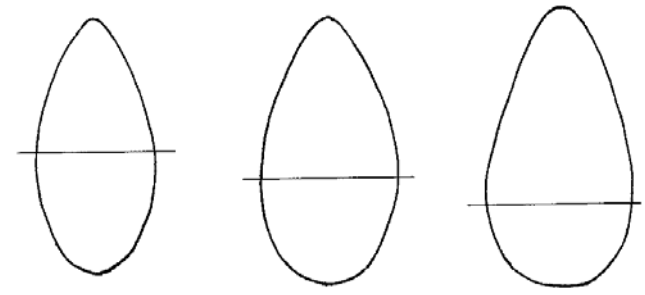
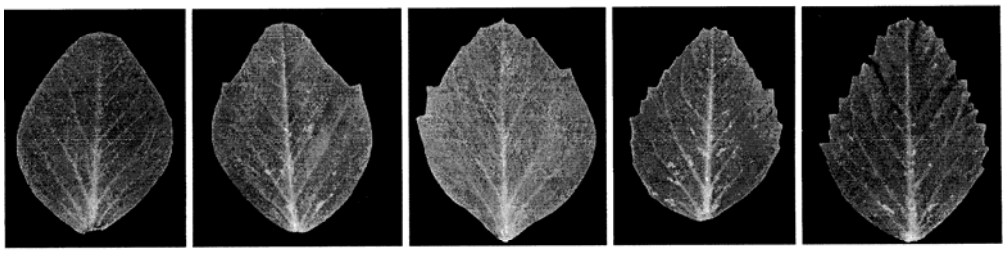
Combinations indicated with “+”can be clearly separated. In general, combinations indicated with “-“cannot be separated.
The notes within grey zones should not be used without knowledge of the parent formula.

Pea (Revision)

60. The TWA discussed documents TG/7/10(proj.5) and TWA/37/12 Rev. and agreed the following:

Altern. names	to delete “Field Pea” (English); Spanish common name to read “Arveja”
3.5	to add “…in the test”
5.3	to replace Char. 5 with Char. 6
5.3	to add Char. 60.1 “Resistance to *Fusarium oxysporum* f. sp. *pisi* (Race 1)”. The TWA noted that the characteristic was not included in the Section 5 of the Technical Questionnaire, but information was sought from the breeder in Section 7.3 of the Technical Questionnaire.
Char. 2	to have the states: absent (1); single ring (2) (example varieties “Assas”, Tirabeque”); double ring (3) (example variety “Caroubel”)
Char. 3	to be deleted (see amendment to Char. 2)
Char. 4	to add (*)
Char. 7	to add example varieties “Paris, Waverex” for state 2
Char. 8	to read “Only varieties with foliage color green (Char. 7: state 2): Foliage: intensity of color
Char. 10	no change
Char. 11	(+) and Ad. 11 to be deleted
Char. 14	state 1: to replace “to” with “or”
Char. 19	to be indicated as MS/VG
Char. 21	to amend growth stage to read “200-240” and to delete “MS”
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 (i.e. not to add MS)
Char. 26	to read “Only varieties with stem fasciation absent: …” and to provide an explanation of the determination of all notes, including an explanation of how variation within and between plants should be considered
Char. 27	to read “Only varieties with plant anthocyanin coloration present: …”
Char. 28	to read “Only varieties with plant anthocyanin coloration absent: …”
Char. 33	state 2 to read “acute”
Char. 36	to replace “1st” with “first”
Char. 40	to be indicated as QN, with the states: absent (1); partial (2); complete (3)
Char. 41	to read “Pod: thickened wall”
Char. 42	to read “Only varieties with pod thickened wall absent: …”

Char. 43	to delete “degree of”
Char. 44	to be deleted
Char. 46	to read “Only varieties with pod color green (Char. 45: state 2): Pod: intensity of green color”
Char. 47	to read “Only varieties with pod parchment not complete: …”; 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. 57	to have the states: same color as testa (1), darker than testa (2)
Char. 60	**60. ~~VS~~VG (+)** **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
	example varieties for Ad. 60 to correspond with Char. 60
Char. 61	to review example varieties for consistency with Ad. 61
Char. 62	to be indicated as VG (not VS)
Ad. 4	to delete first sentence of explanation and to add arrow to indicate fasciation
Ad. 7	to be deleted and (+) to be deleted from Char. 7
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. 20	to add “length of” for “G-H”
Ad. 26	to read “Assessment should be made over all flowering nodes of the plant.”
Ad. 33	to replace illustrations with photographs
Ad. 37	to provide an illustration of a bract
Ad. 40	to delete text after (2)
Ad. 41	to add an illustration
Ad. 42	to delete second sentence
Ad. 45	final sentence to read “… within the plant.”
Ad. 47	to delete second paragraph
Ad. 48	to add an explanation that the characteristic concerns the number of ovules and not the number of seeds
Ad. 49	to read “Immature seed color in some varieties with green cotyledons may appear creamy white before the seed is fully developed. Observations should be made on

	fully-developed, fresh immature seed". Paragraph "Assessment of dry seed characteristics" to be moved to Chapter 8.1 with a note to be added for all relevant characteristics.
Ad. 50	to delete heading "Exclusion of 'end' seeds"
Ad. 52	to provide illustration (photograph)
Ad. 57	to explain colored / not colored in relation to tannin
Ad. 59	to read "Seed weight should be measured on at least two samples of 100 seeds. Immature and infected seeds should be excluded."
Ad. 60	to clarify the genetic background in relation to the states of expression
Ad. 61	to explain that Er 1 / er 2 and er 1 / Er 2 are susceptible
Ad. 62	to check whether final sentence should read "Five pathotypes and four resistance alleles are known."
TQ 9.3	to be deleted

61. The TWA agreed that the Test Guidelines for Pea, as amended above, should be circulated to the TWV for agreement and, subject to agreement by the TWV, should be submitted to the TC for adoption.

Pearl Millet[*]

62. The subgroup discussed document TG/PRL_MIL(proj.5) as presented by Mr. Luís Gustavo Asp Pacheco (Brazil), and agreed the following:

3.5.1, 3.5.2	to add "and any other observations made on all plants in the test"
Char. 1	to read "Leaf sheath: anthocyanin coloration of base" and to have the states: absent or weak (1); medium (2); strong (3)
Char. 2	to add (+) and provide illustration
Char. 3	to be deleted
Char. 4	to be deleted
Char. 5	to be deleted
Chars. 6, 7	to be indicated as MS
Char. 8	to be deleted
Char. 9	to read "Leaf blade: color" and state 1 to be deleted
Char. 11	to be deleted
Char. 12	to add (*); to add (+) with explanation for time of observation (varies during day); to delete states 1 and 3
Char. 15	to be indicated as DS 8, MG; to read "Plant: length"; and to add (+) and provide illustration / explanation
Char. 16	to be deleted

Char. 17	to be deleted
Char. 18	to have the states: conical (1); trullate (2); subulate (3); cylindric (4); obtrullate (5)
Char. 19	to be indicated as MS and to add (+) and provide illustration
New (after Char. 19)	to read “Panicle: tip sterility”, with the states absent (1), present (9); but to check if expressed in all environments
Char. 20	to be indicated as MS
Char. 21	to have notes 1, 2, 3 and to delete the illustration for note 3 in Ad. 21
Char. 22	to have the states: absent (1); present (9)
Char. 23	to be deleted
Char. 24	to be deleted
Char. 26	to be deleted
Char. 27	to read “Glume: number of bristles” and to add (*)
Char. 29	to read “Glume: density of bristles”
Char. 30	to be deleted
Char. 32	to check whether the characteristic is reliably expressed, e.g. if the ranking of varieties changes with location
Char. 33	to be deleted
Char. 35	to add (+) with explanation of where to observe
Char. 36	to be deleted
Char. 37	to be deleted
Char. 38	to be deleted
Char. 39	to add (+) and provide illustration and explanation that it should be observed on the main panicle
Char. 40	to be deleted
Char. 41	to have the states: elliptic (1); rectangular (2); circular (3); obtrullate (4); obtriangular (5)
Char. 42	states to be reviewed
Char. 43	to be deleted
Char. 44	to be deleted
TQ 5	to amend to Chars. 10, 12, 13 and 27, as per grouping characteristics
TQ 9.3	to be deleted

Swede Brassica napus L. var. napobrassica (L.) Rchb. (Partial revision)

63. The TWA considered document TWA/37/8 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"

Sweet Potato

64. The subgroup discussed documents TG/SWEETPOT(proj.3) and TWA/37/13 as presented by Mr. Keun-Jin Choi (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", however, 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 cuttings."
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 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	leading and interested experts to check grouping and TQ chs
Ch. 1	to read: "Plant: growth habit" with the states of expression "upright (1), semi-upright (3) and spreading (5)".
Ch. 2	to be indicated as MS/VG

Ch. 3	to read: “Stem: length of internode”; to delete (b) and to be indicated as MS/VG
Ch. 4	to read: “Stem: diameter of internode”; to delete (b), to add VG
Ch. 5	to be deleted
Ch. 6	(*) to be deleted, to read: “Stem: anthocyanin coloration of internode” and to check correlation with chs7 and 8
Ch. 7	to read: “Stem: anthocyanin coloration of tip”
Ch. 8	(*) to be deleted and to read: “Stem: anthocyanin coloration of node”
Ch. 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
Ch. 10	to add explanation of lobe and to reconsider chs. 10 to 15 accordingly
Ch. 12 and 13	to be deleted.
Ch. 16	to read: “Leaf blade: anthocyanin coloration of upper side”
Ch. 17	to delete the (*) and the term “main” from the wording.
Ch. 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
Ch. 20	to be deleted.
Ch. 21	to check to maintain with states of expression “yellow green”(1); “light green”(2), “medium green”(3), “dark green” (4), “light purple” (5), “medium purple”(6), “purpplish, brown”(7), “light brown”(8), “dark brown”(8); “ornamental varieties only” to be deleted. Japan to provide example varieties
Chs.22 to 30	to be deleted
Ch. 32	to receive explanation in Chapter 8.2, to indicate, in particular , the difference between “scattered (2)” and “all over the petiole (3)” and to add example varieties
Ch. 34	to be deleted
New Ch.	Flower: presence of flowers, with states of expression “absent”(1) with example variety “Serolane” and “present”(9), with example varieties “Khano” and “Impilo”.
Chs. 34 and 35	to be deleted
Ch. 36	to check and exchange information on example varieties amongst interested experts.
Ch. 38	To have the following states of expression: “towards the tip”(1); in middle (2) and “towards the base”(3).
Ch. 39	to check whether to read: “thickness of cortex relative to overall diameter”.
Ch. 40	move explanation in brackets to Ad.40 and JP, KE and ZA to provide example varieties to leading expert.

Ch. 41	add (+) with explanation of secondary color; to have the states: absent (1), white (2) with example variety “Tamayutaka”, yellow (3), orange (4), pink (5) with example variety “Koukei N° 14”, red (6), purple (7), brown (8) and Japan to provide missing example varieties and Kenya will check example varieties
Ch. 42	to receive explanation on main color in Chapter 8.2, to have a new state of expression “beige” and ZA to provide example variety.
Ch. 43	to be indicated as QN; to receive explanation on main color in Chapter 8.2 and to delete the (*).
Ch. 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. To check the usefulness of this characteristic, and whether to be absent/present or deleted.
Ch. 45	to be deleted.
8 (a)	to read: “(a) observations should be made after 90 days from planting”.
8 (b)	to read: “(b) to be observed on the main stem”
8 (d)	to read: “Observations to be made on fully developed leaves at the middle part of the main stem”
8 (f), (g), (h)	to be deleted.
Ad. 18	With rewording of state (1) not necessary to provide drawing for this state

Urochloa (Brachiaria)

65. The subgroup discussed document TG/UROCH(proj.2) as presented by Mr. Fabrício Santana Santos (Brazil), and agreed the following:

Cover page	To check species with GRIN Database
2.3	to read: “2.3 The minimum quantity of plant material, to be supplied by the applicant, should be: 200 g of seed, for seed propagated varieties or 60 plants, in the case of vegetatively propagated varieties. In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant.”
2.5 and 2.6	to be renumbered 2.4 and 2.5 respectively

3.3.1	to add “C: special test”
3.4.1	to read: 3.4.1 Each test should be designed to result in a total of at least 60 spaced plants at 1,5 m. by 1,5 m. and 10 meters of row plot.”
3.5.2	“distributed over a 2 m x 2 m area or in a 10 m row” to be deleted
4.2.3	to check uniformity standards for Seed propagated and for vegetatively propagated varieties
5.3	to add characteristic 2, 24 and 25
Table of Chs. general	AU, BR and ZA will made a ring test to define example varieties. BR will provide the test design before September
Ch. 1|	to be indicated “C” as method of observation
Ch. 2	to have the following notes and states of expression: “upright”(3); “semi upright”(5) and “spreading”(7)
Ch. 3	to be indicated as “VG/MS” and to improve drawings
Ch. 4	to check if reliable and to delete note (b)
Ch. 5	to check if reliable
Ch. 6	to be indicated as QN with states of expression and notes as follows: “absent or very weak”(1); “weak”(3); “medium”(7) and “strong”(7)
Ch. 7	to provide a better illustration or photographs
Ch. 8	to have states of expression and notes as follows: “absent or very weak”(1); “weak”(3); “medium”(7) and “strong”(7)
Ch. 9	to delete note (b), to amend the spelling of “length” and to add an explanation indicating which internode to measure
Ch. 10	To have notes 3-5-7
Ch. 11	to check if to be observed in the flag leaf, usefulness for DUS, and if maintained to check whether is QN
Ch. 12	to read: “Leaf sheath: density of hairs” and check if there is QL characteristic for absence / presence
Ch. 13	to read: “Only varieties with hairs on leaf sheath: Leaf: distribution of hairs of sheath”, with the following states of expression and notes: “at base”(1); “at apex”(2); “on margins”(3) and “throughout”(4).
Ch. 14	to be indicated as PQ; to add (+) and provide illustration, to have the following states of expression and notes: “linear”(1); “linear triangular”(2) and “lanceolate”(3). To have example variety “Mulato II” for state (2).
Ch. 15	to be indicated as “MS” and to have example variety “Mulato” for state (5) and “Toledo” for state(7).
Ch. 16	to add example variety “Mulato” for state (7)

Ch. 18	to check usefulness for DUS and the possibility of separating into two characteristics (states 1-3 / 4-6).
Ch. 19	to read: “Inflorescence: length of peduncle” and to add illustration.
Ch. 20	to be indicated as “MS” to read: “Inflorescence: length of main rachis” and to add illustration.
Ch. 21	to be indicated as “MS” and to add (+) and illustration.
Ch. 22	to add (+) and provide illustration.
Char. 23	to be deleted
Ch. 24	to add **(*)** and to add example variety “Mulato” to state (2); and state (7) to read “dark purple, with example varieties “Toledo, Marandú”.
Ch. 25	to add (*) and to provide illustration.
Ch. 26	to check correlation with 12 and 17, if correlated to be deleted.
Chs. 28 and 29	to check if useful for DUS.
Ch. 30	to be deleted
Ch. 31	to be indicated as PQ
8.1 (a)	to read: “(a) Unless otherwise stated, all observations on the vegetative characteristics should be done at full flowering stage, in the first growing cycle.”
8.1 (c)	to provide explanation for the terms “stolonipherous” and “caespitosae”.
Ad. 3	To check whether “at the beginning of flowering” is the right moment for the assessment and to improve the drawings.
Ad. 7	To provide better drawings or photographs.
9	Include ISTA reference, AU and BR to provide bibliography.
10.1	to create separate tick boxes for the different species.
10.5	Chs. 8, 17 and 27 to be deleted and to add Chs. 24 and 25.
10.6	to provide an example.

Combinations of Lines or Varieties

66. The TWA considered documents TWA/37/7 and TWA/37/7Add. and received a presentation by Mr. Rodolfo Caicedo (Colombia), based on documents TWA/37/7Add..

67. The TWA noted that, if the 35 lines of which Castillo was composed were phenotypically identical except for disease resistance, and if disease resistance was not a routine DUS characteristic for the authority concerned, it would be a matter for the authority to decide whether disease resistance should be considered to be a relevant characteristic. In particular, it was noted that TGP/10 Draft 9, paragraph 1.2 stated that “[…] it is a matter for the authority to decide, in addition to those characteristics included in the UPOV Test Guidelines or national guidelines, which other characteristics it may include in its consideration of distinctness, which must also be considered for uniformity and stability.”. It

was further noted that, unless the breeder notified the authority of differences in disease resistance for the lines, the authority might not be aware of those differences and would not examine that characteristic for DUS.

68. However, it was noted that if the 35 lines of which Castillo was composed had differences for the characteristics routinely examined for DUS by the authority concerned, then Castillo would not be considered to be uniform. A number of experts questioned whether it was likely that the 35 lines would be morphologically identical according to the breeding scheme presented in document TWA/37/7Add.. It was noted that, in such a case, protection for Castillo could be obtained by protection of individual lines. Mr. Caicedo explained that the cost of obtaining protection of the individual lines was a reason why the breeder was seeking a single title of protection for Castillo. The TWA agreed that such a plant grouping might not satisfy the definition of variety in the 1991 Act of the UPOV Convention. It also noted that "Castillo" was protected by a trademark.

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

69. The TWA considered document TWA/37/9.

Test Guidelines for Common Millet

70. The TWA agreed to the proposed amendments as set out in document TWA/37/9, paragraph 4, subject to the following:

Char. 29	to read as follows:

			Example Varieties	Note
29. (*)	**90-92 VG**	**Kernel (not polished): color**		
QN	**(a)**	whitish	Veselopodolyanske 176	1
		light yellow	Kyivske 96	2
		medium yellow	Omriyane	3

Char. 31	to read "Kernel: type of endosperm" and Ad. 31 to read "The characteristic is observed by reaction to Potassium Iodide solution: waxy type endosperm is stained reddish purple; non-waxy type endosperm is stained blue purple."

Test Guidelines for Coffee

71. The TWA agreed to the proposed amendments as set out in document TWA/37/9, paragraph 5, subject to the following:

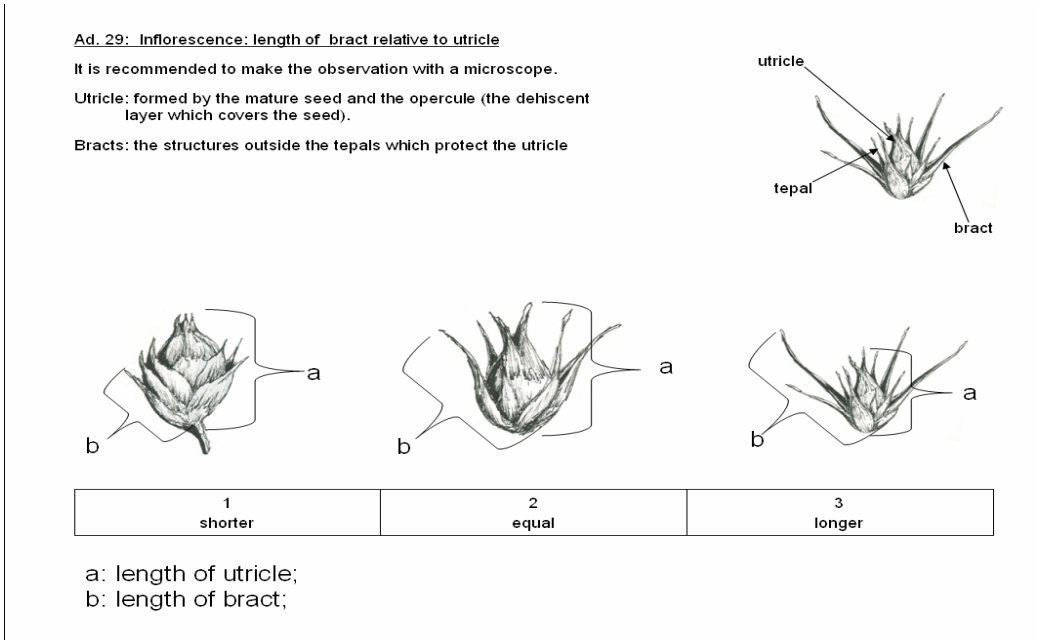
Table of	to add (*) for the following characteristics

Characteristics	Char. 1: Plant: shape Char. 2: Plant: height Char. 4: Plagiotropic primary branch: length of internode Char. 13: Inflorescence: number of flowers Char. 15: Fruit: shape (example variety for elliptic: "Laurina IAC 870") Char. 16: Fruit: color Char. 19: Seed: length
Ad. 24	to read "The time of flowering is when 50% of flowers are at anthesis"
9.	to add reference for illustration of plagiotropic branches

Test Guidelines for Grain Amaranth

72. The TWA agreed to the proposed amendments as set out in document TWA/37/9, paragraph 6, subject to the following:

Char. 29	to read "Inflorescence: length of bract relative to utricle", with the states: shorter (1); equal (2); longer (3)
Ad. 29	to read as follows:



UPOV Information Databases

73. The TWA noted the information provided in document TWA/37/4 and agreed to provide comments on the UPOV codes by August 30, 2008.

Variety Denominations

74. The TWA noted the information provided in document TWA/37/5 and the TWV proposal 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 and the proposal that the name of Class 211 should be changed to "Class 211 (Mushrooms)".

Project to consider the publication of variety descriptions

75. The TWA noted the report provided in document TWA/37/6. The expert from France explained that the maize database developed by France, Germany and Spain could be a model, but emphasized that the data within that database could not be shared. It was noted that, in paragraph 16, the word "financed" should be replaced by "co-financed".

Development of regional sets of example varieties for the Test Guidelines for Rice

76. The Office of the Union reported that no new information was available concerning the development of a set of example varieties for rice for South-east Asia. However, it was anticipated that a report would be made at the thirty-eighth session of the TWA.

Recommendations on draft Test Guidelines

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

77. The TWA 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:

Pea (Revision) (document TG/7/10(proj.5))
Maize (Revision) (document TG/2/7(proj.3))
Swede *Brassica napus* L. var. *napobrassica* (L.) Rchb. (Partial revision) (documents TG/89/6 and TWA/37/8)

(b) Test Guidelines to be discussed at the thirty-eighth session

78. The TWA agreed to re-discuss the following draft Test Guidelines at its thirty-eighth session:

Buckwheat (*Fagopyrum esculentum* Moench)
Durum wheat (Revision) (*Triticum durum* Desf.)
Flax, Linseed* (Revision) (*Linum usitatissimum* L.)
Foxtail millet (*Setaria italica* (L.) P. Beauv.)
Hemp (*Cannabis sativa* L.)
Pearl Millet*
Sesame*
Sweet potato* (*Ipomoea batatas* (L.) Lam.)
Urochloa (Brachiaria)*

79. The TWA agreed that it should start to establish or revise Test Guidelines for the following at its thirty-eighth session:

Cassava (*Manihot esculenta* Crantz.)
Common Vetch (*Vicia sativa* L.) (Revision)

80. The leading experts, interested experts and timetables for the development of the Test Guidelines are set out in Annex V.

81. The TWA agreed to invite the expert from Ukraine to make a presentation on *Sorghum oryzoidum*, in order to decide whether to start the development of Test Guidelines.

Date and Place of the Next Session

82. At the invitation of the Republic of Korea, the TWA agreed to hold its thirty-eighth session in Seoul, Republic of Korea, from August 31 to September 4, 2009. The TWA was informed that KSVS would organize an international symposium, in cooperation with UPOV, prior to the thirty-eighth session of the TWA.

Future Program

83. The TWA 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
5. TGP documents
6. UPOV information databases
7. Variety denominations
8. Project to consider the publication of variety descriptions
9. Combination of lines or varieties
10. Development of regional sets of example varieties for the Test Guidelines for Rice
11. Presentation on *Sorghum oryzoidum*
12. Discussion on draft Test Guidelines (Subgroups)
13. Recommendations on draft Test Guidelines
14. Date and place of the next session
15. Future program
16. Report on the session (if time permits)
17. Closing of the session

Medal

84. Mrs. Beate Rücker was awarded a UPOV bronze medal in recognition of her chairmanship of the TWA from 2006 to 2008.

Visit

85. On the afternoon of July 15, 2008, the TWA visited field trials of oat, rye and pearl millet, at Lowveld Agri-Research and Support Service in Nelspruit. The TWA also visited the Golden Macadamias factory where it saw the processing of macadamia nuts.

86. The TWA adopted this report at the close of the session.

[Annexes follow]

ANNEX I

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[Annex II follows]

ANNEX II

Welcome Address made by

Julian Jaftha,

Director, Genetic Resources, Department of Agriculture

I am pleased to welcome you to this 37th Session of the TWA meeting here in South Africa, Mpumalanga. I realize that the drive here from the airport may have seemed very long and extended but I want to assure you that you are in fact still within the boundaries of South Africa. It has been some time since we've initiated plans to host this event in South Africa and we are glad that we've actually reached this point of hosting you here. We are more than convinced that this venue offers you are true feeling of Africa and I have been informed that some of the animals have already showcased themselves. I wish you fruitful deliberations and a successful completion of this meeting.

At this point I am even more pleased to welcome and introduce Mr Jomo Mnisi, who is official representative of the Dep of Agriculture and Land Administration. Mr Mnisi's Functional responsibilities includes

- Sustainable Resources Management
- Agricultural Economics
- Research and Technical Development
- Agricultural Training

Mr Mnisi, it is indeed an honor to have you here to officiate the opening of this TWA meeting and present an overview of agriculture within the Provinces of Mpumalanga. Thus far we have enjoyed the support of various role players within your provinces without which this event would not have been possible. We are looking forward to the attendance of other members of your political leadership at the gala dinner to be hosted by the Minister later this week.

It is encouraging to note that the leadership within this Province is recognizing the importance of this event, please convey this message to your principals.

Speech at the occasion of the official dinner

Delivered by Mr Andile Hawes,

Deputy Director General: Production and Resource Management,

Department of Agriculture

on behalf of the Minister of Agriculture of South Africa

Representatives from the Office International Union for the Protection of New Varieties of Plants (UPOV), the US Patents and Trademarks Office, honored delegates from UPOV members States and observers from SADC Member States.

Representative of the HOD of the Provincial Department of Agriculture & Land Administration

It gives me great pleasure to welcome you to our country, especially to the Province of Mpumalanga – the place where the sun rises. This is indeed a place of scenic beauty with a diversity of fauna and flora. I am informed that during your short stay here you have already had some encounters, and hopefully not close encounter, with the some of the wildlife. I am also glad to note that the Representative of the HOD has already given you some orientation on the Province, in particular an overview of agriculture within this province.

South Africa has been a member of UPOV since 1977 and has exercised its obligations under this Convention through the administration of the Plant Breeders' Right Act. Breeders from all over the world are therefore assured that their Intellectual Property Rights are adequately protected when new varieties are released within the country. To date, close to 2000 Plant Breeders' Rights are valid within South Africa, 40% of such rights are held by SA residents. A detailed report on the administration of the Act has already been presented by the Registrar as part of the opening sessions. I am sure that through your interactions with her and other South African technical officials you are now fully versed with our domestic regulatory framework.

As we all know, UPOV seeks to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society. I therefore wish to acknowledge the role UPOV has played over the past number of years in the development of internationally recognized standards for various crops. And I realize that these standards are developed through the tireless efforts of technical experts during the meetings of the various Technical Working Parties; the Technical Working Party on Agricultural Crops (TWA), which is meeting here, being one such group. As a member of UPOV, our domestic regulatory system has greatly benefited from our engagement with the various UPOV structures and other member countries of the Union. Many of our officials from the variety testing unit and others from our research institutions have also successfully completed the UPOV Distance Learning Course and we will continue to use this as a means to improve our capacity in this all important area.

Ensuring availability and access to sufficient, safe and nutritious food and increasing growth, income and remunerative job opportunities in agriculture are but two ways in which the DoA aims to achieve its mission of leading and supporting sustainable agriculture and promoting

rural development. Protection of intellectual property rights has a definite contributory role to play in this regard as it stimulates further innovation. There are many other issues on Intellectual Property Right regimes that require on-going attention such as its impact on traditional knowledge systems and biodiversity. And we are all aware that such discussions are on-going in other fora.

Recognising the intellectual investment in the development of new varieties one needs to have an appreciation for the need of breeders to protect their intellectual property rights. And where no framework exists to offer such protection, breeders may be hesitant to release such varieties. The impact of such a lack of access on effective and efficient agricultural production requires no little elucidation.

A recent study commissioned by UPOV on the impact of plant variety protection in Argentina, China, Kenya, Poland and the Republic of Korea demonstrated the following:

- increases in the overall numbers of varieties developed after the introduction of a Plant Variety Protection (PVP) system. These included a wide range of staple crops, important horticultural crops and forest trees.

- increased variety applications by foreign (non-resident) breeders following the introduction of the UPOV PVP system

- an increase in the number of domestic breeding entities (which were mainly of the private sector)

This clearly demonstrates the advantages of the introduction of a Plant Variety Protection System.

In the face of so many biotic and abiotic challenges sustainable agricultural production is increasingly challenging. Considering the recent rise in food prices, Agriculture as a sector is under pressure to address the cost drivers along the full production value chain. Within our country, increasing agricultural production by 10-15% has been identified as a priority area. I am sure you would agree that access to appropriate plant varieties is a critical success factor if we are to meet the demand for food.

Agricultural development and ultimately food security within the Region is also an important consideration for SA. I am therefore glad that the DoA could partner with UPOV, the US Patents and Trademarks Office and the SADC Secretariat to offer some training to SADC member States on Plant Variety Protection. This workshop preceded this TWA meeting and was attended by delegates from the various SADC Member States. I am informed that the workshop was successfully concluded and look forward to receiving the report on the outcomes thereof. Moreover, I am hoping that its impact will now contribute towards conclusion of the work on the Harmonized Seed Regulation System for the SADC region. I wish to thank UPOV for also allowing members of SADC countries to attend this TWA meeting in an observer capacity. I am sure this had offered them the opportunity to have first hand experience on the dynamics involved in these meetings and that the necessary linkages have been established to assist them with future establishment and implementation of their regulatory frameworks.

In considering the programme for this TWA meeting, I am aware that you have visited some trial sites and a Macademia factory in Nelspruit. I trust this offered you a welcome break from the long discussion sessions and that you are ready and refreshed to continue the

work. Equally, that you have had the opportunity to interact with members of the SA community beyond this scientific fraternity.

Lastly, I wish to thank everyone for their contribution towards the successful hosting of this meeting of the TWA in particular the office of UPOV, US Patent and Trademarks Office (for supporting the attendance of the SADC members), the officials from the DoA, Provincial DoA and local Government officials.

Please enjoy this evening with us and experience the warm SA hospitality. May each and everyone enjoy this meeting and utilize the opportunity of available experience and knowledge to its maximum.

Presentation made by

Mr. Jomo Mnisi,

Department of Agriculture and Land Administration,

Chief Director: Professional Support Services,

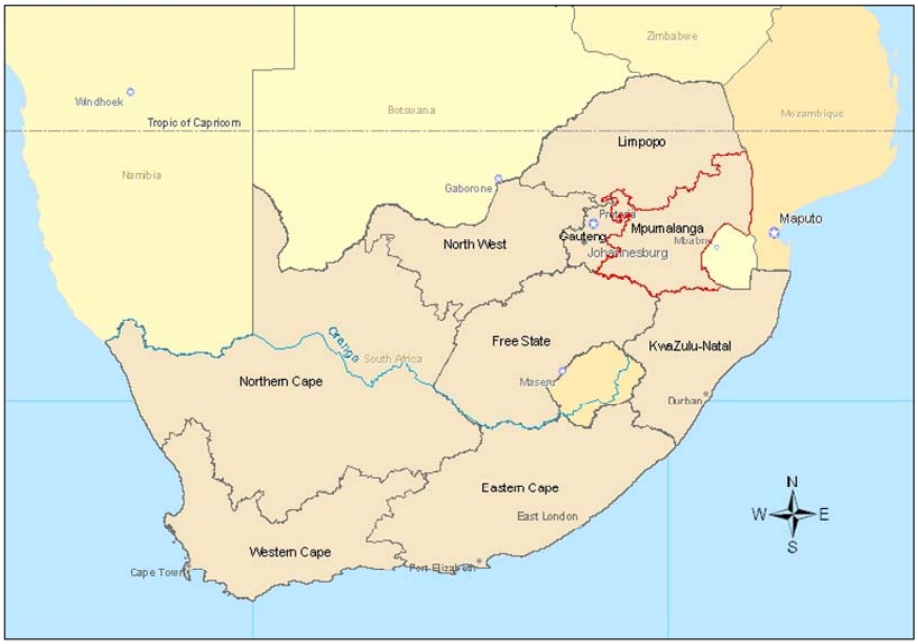
Mpumalanga Province

Mpumalanga Province

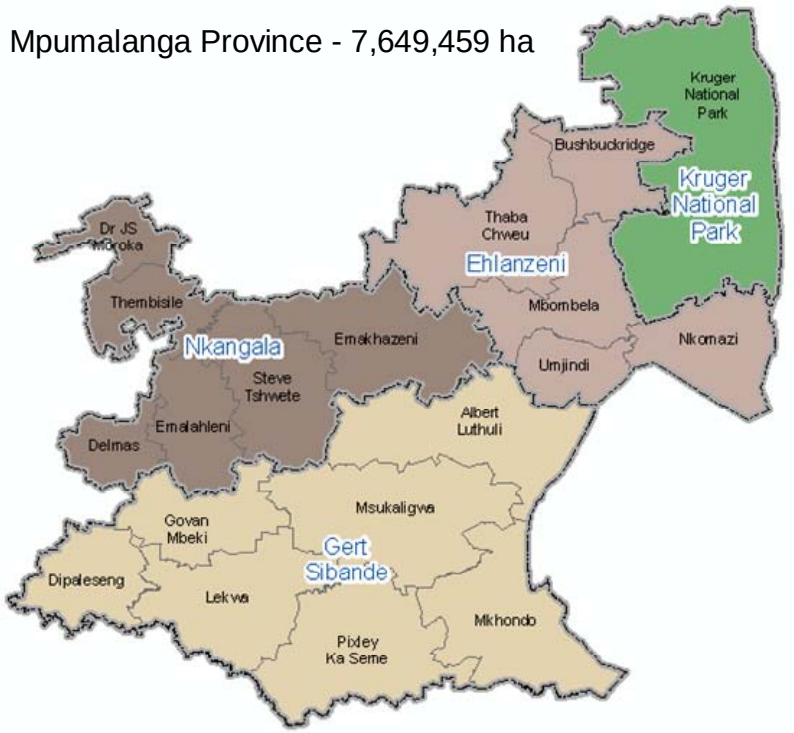
Department of Agriculture and Land Administration

Mpumalanga Agricultural Overview

Mpumalanga Province

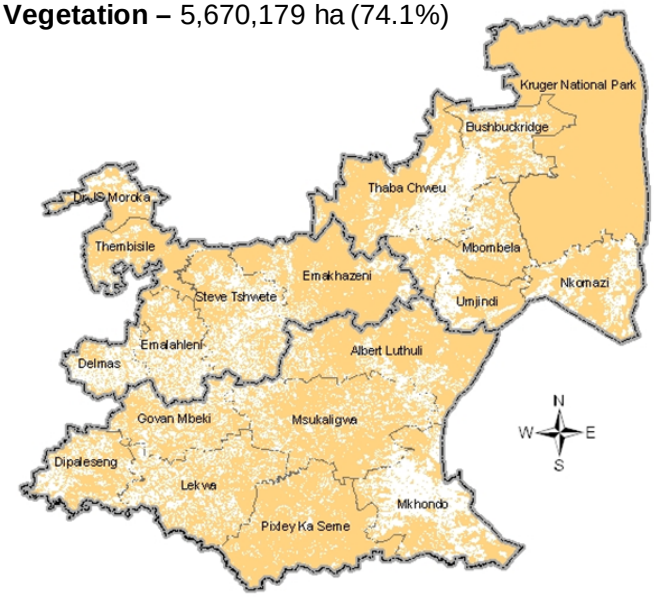


Mpumalanga Province - 7,649,459 ha



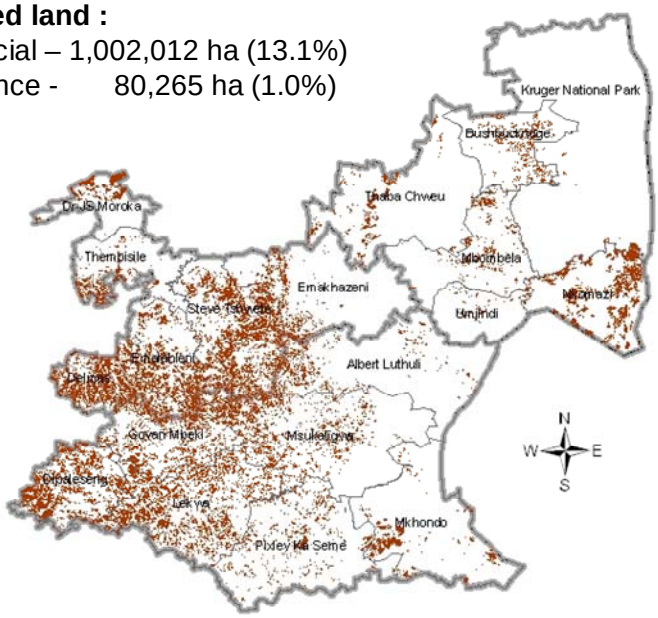
Land Cover

Natural Vegetation – 5,670,179 ha (74.1%)



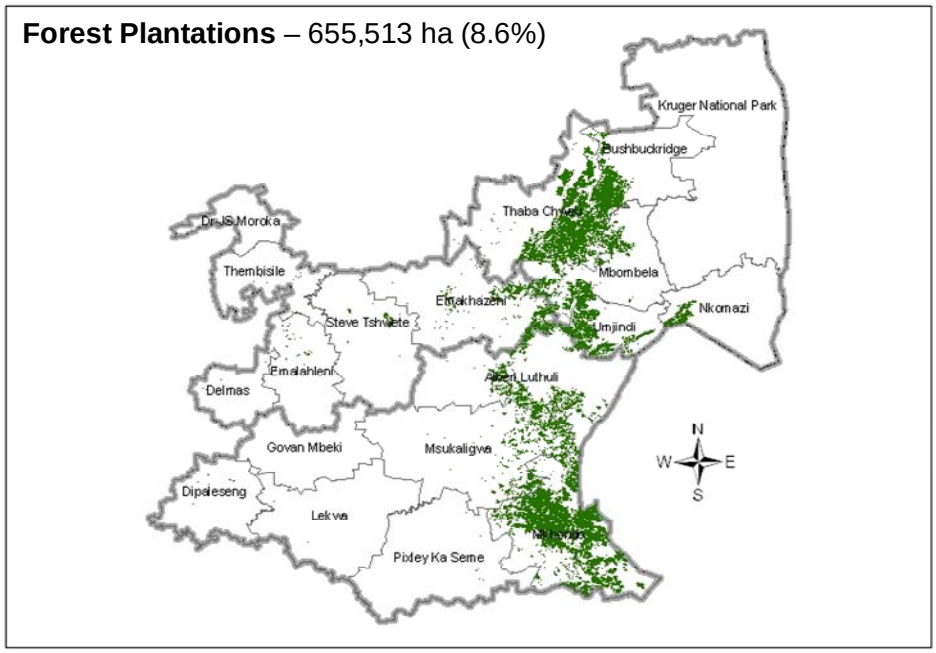
Land Cover

Cultivated land :
Commercial – 1,002,012 ha (13.1%)
Subsistence - 80,265 ha (1.0%)



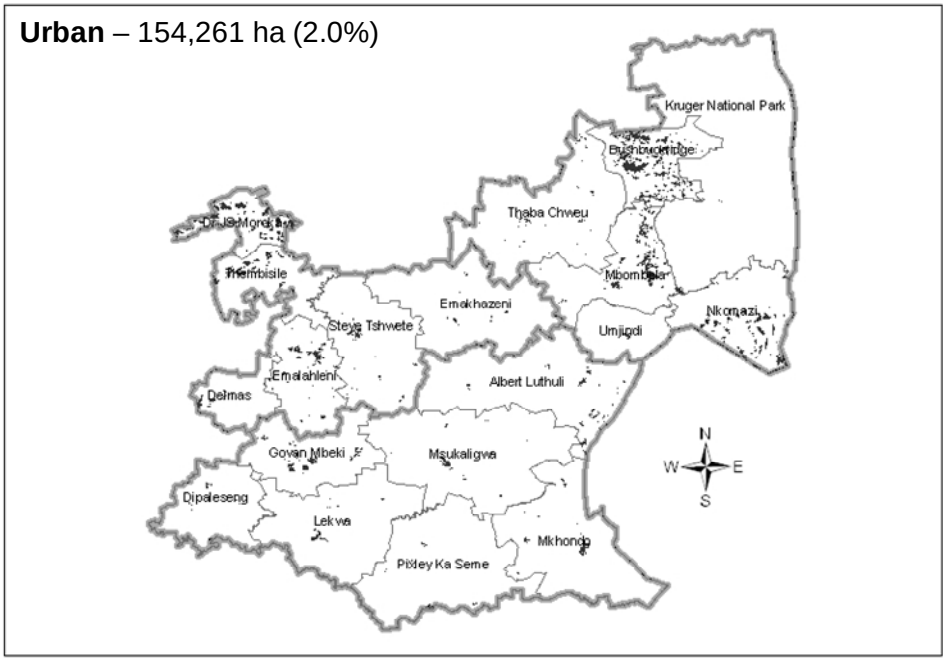
Land Cover

Forest Plantations – 655,513 ha (8.6%)



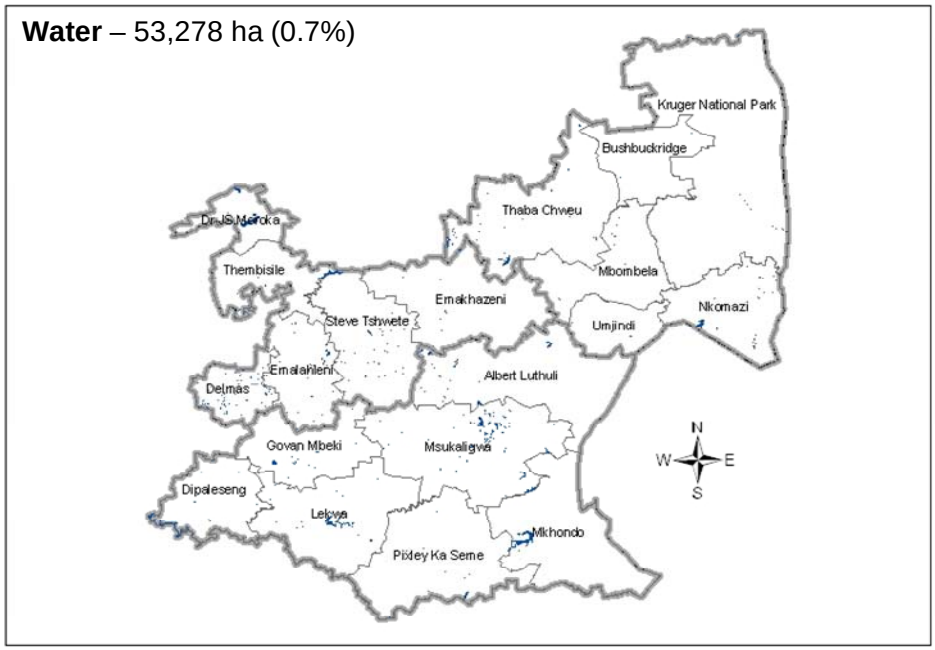
Land Cover

Urban – 154,261 ha (2.0%)



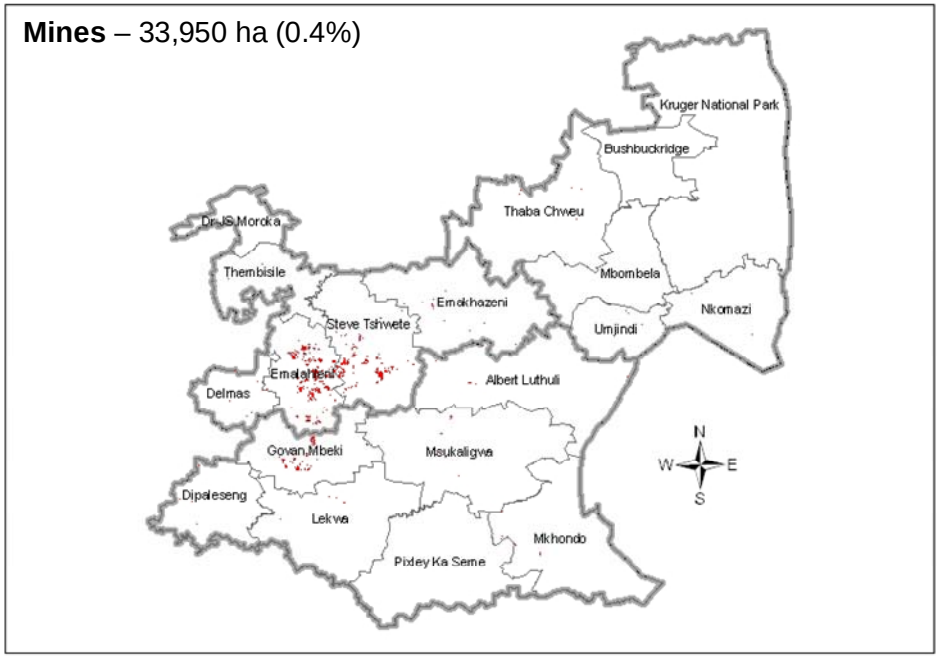
Land Cover

Water – 53,278 ha (0.7%)



Land Cover

Mines – 33,950 ha (0.4%)



Land Cover

Land Cover Class	Area (ha)	
Natural Vegetation	5,670,179	(74.1%)
Cultivated land : Commercial	1,002,012	(13.1%)
Subsistence	80,265	(1.0%)
Forest Plantations	655,513	(8.6%)
Urban	154,261	(2.0%)
Water	53,278	(0.7%)
Mines	33,950	(0.4%)
TOTAL	**7,649,459**	

Crop Distribution

Crop Production 2007/8

Crops	**Ha**	**% of National Production**
Dry beans	12 500	40
Soybeans	87 000	55
Maize	518 000	25
Sunflower	17 000	
Sorghum	19 000	19
Wheat	5 000	
Potatoes	3 017	9
Apples	120	
Berries	15	
Bananas	4 303	58
Litchies	3 028	

Crop Production 2006/7

Crops	**Ha**	% of National Production
Mangoes	2 000	29
Citrus	4 000	21
Pecan nuts	670	
Macadamia	5 000	
Vegetables	500	
Avocadoes	4 400	33
Flowers	5	
Sugarcane	49 500	
Tomatoes		15
Papaya	700	

Commercial Farmers

Agri Mpumalanga	1 395 farmers	(170 black farmers)
Transvaal Agric. Union	1 000 farmers	
National Agricultural Farmer's Union		

Farmer Support

- Extension Services

Male	111
Female	72
Total	183

- Funding

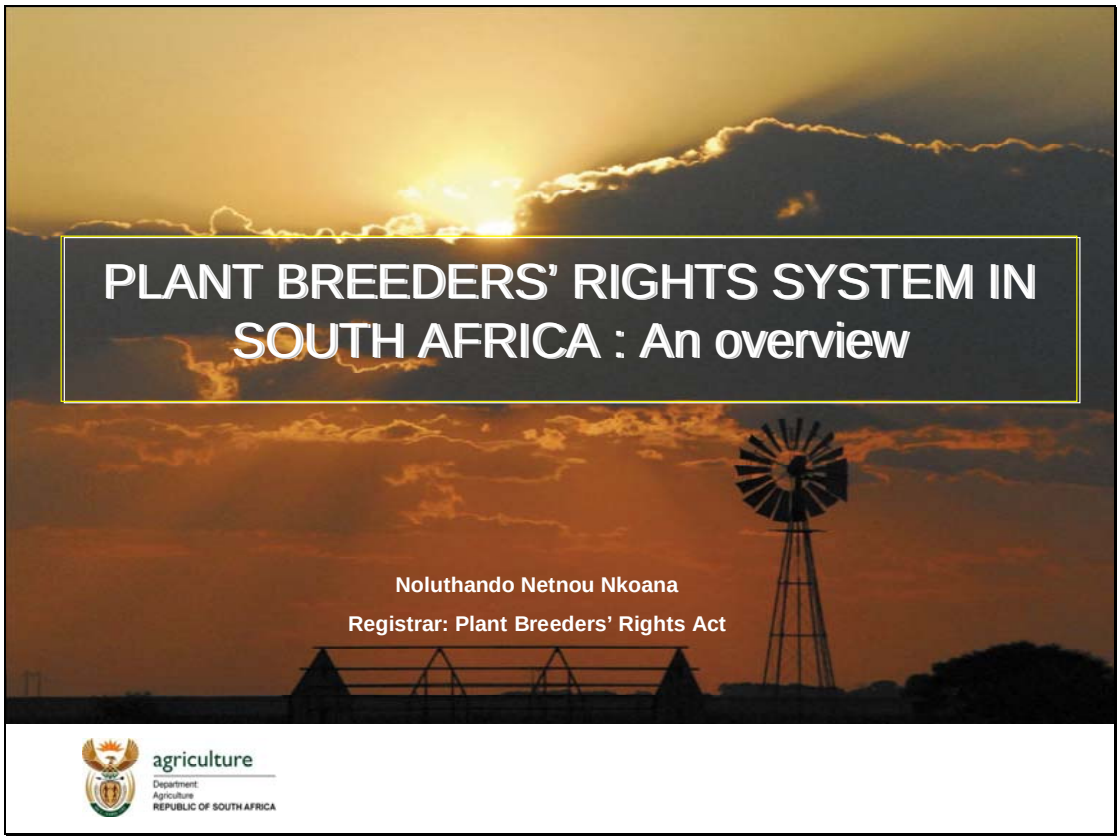
[Annex III follows]

ANNEX III

Presentation made by

Ms. Noluthando Netnou Nkoana,

Registrar of Plant Breeders' Rights



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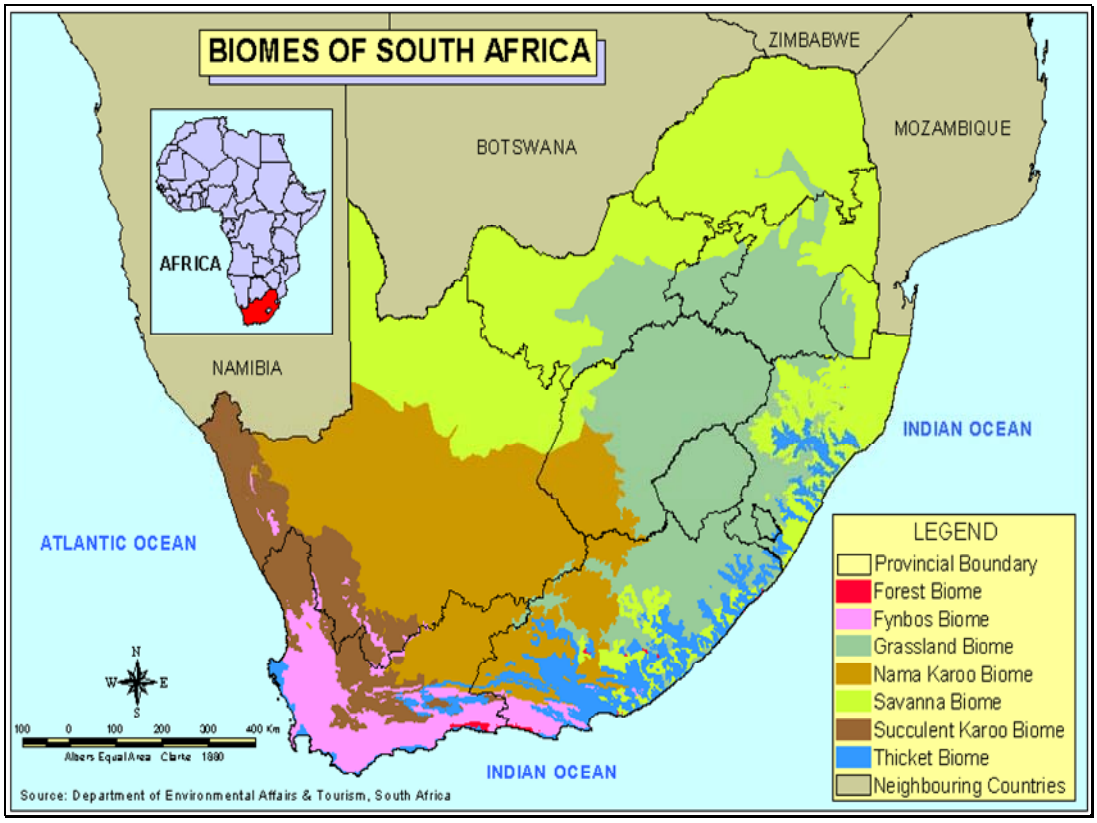
INTRODUCTION

- South Africa covers 1.2 million square kilometers and 3 000 kilometers coast line.
- Wide range of climatic conditions, and many variations in topography.
- Third most diverse country in the world, more than 10% of the world's vascular plants.
- More than 20 300 different plants, ›10 000 endemic.
- Divided into seven biomes with distinct environmental conditions: Nama Karoo, succulent Karoo, fynbos, forest, thicket, savanna, and grassland.

2



THREATS TO BIODIVERSITY

- Climate change
- Habitat destruction
- Trade in wildlife
- Invasive alien vegetation

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BIODIVERSITY ACT, 2004 (Act No. 10, 2004)

- To provide for:

➢ the management and conservation of South Africa's biodiversity

➢ the protection of species and ecosystems that warrant national protection

➢ the sustainable use of indigenous biological resources

➢ the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources

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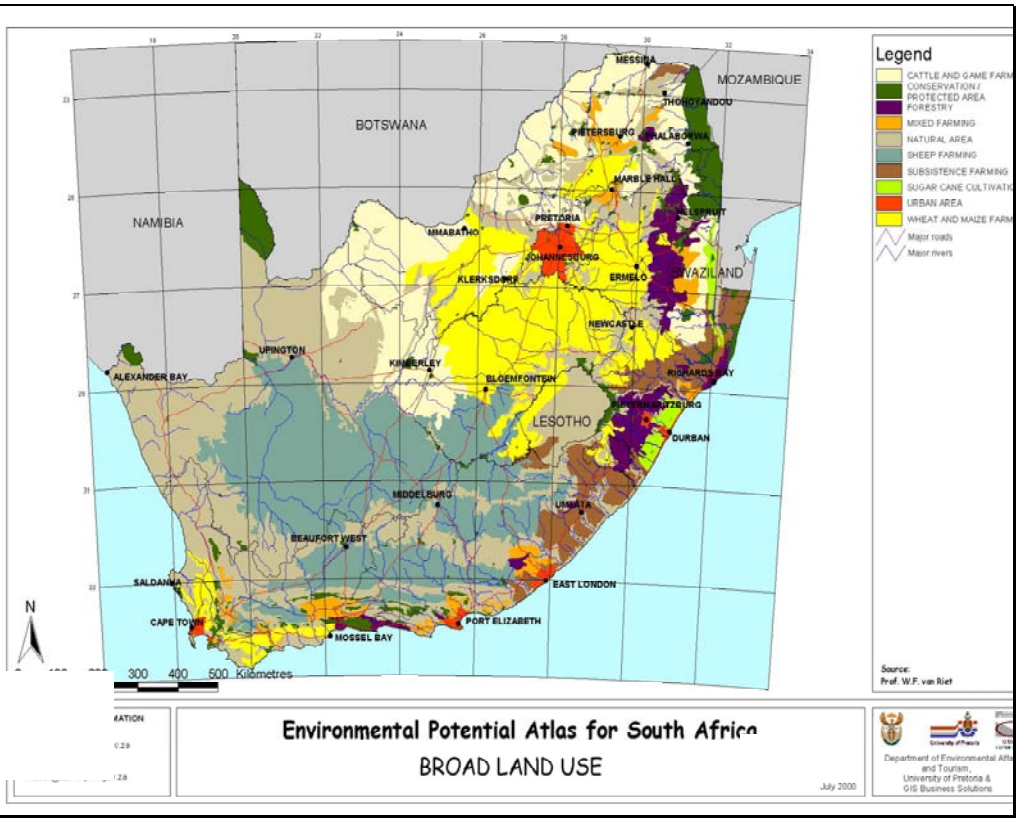
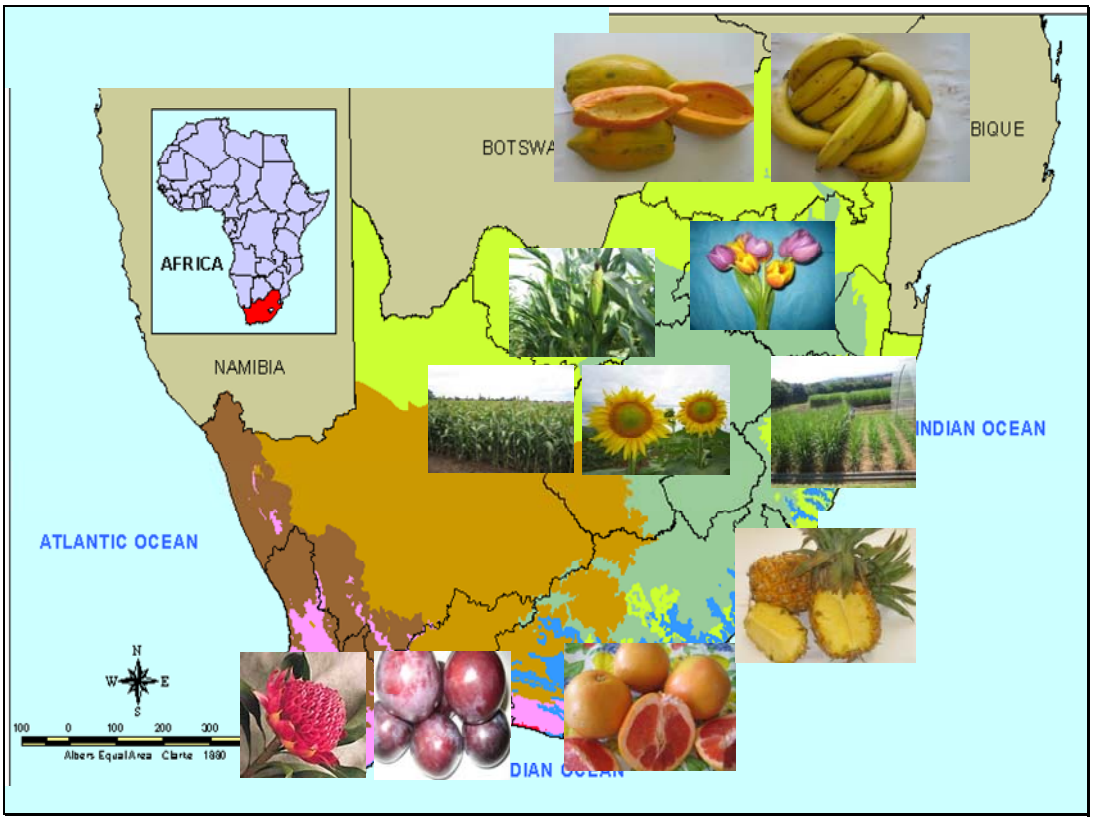
SOUTH AFRICAN AGRICULTURE

- Dual agricultural economy: commercial & subsistence farming.
- About 15 million hectares under cultivation, 10% under intensive irrigation.
- Activities range from intensive crop production to mixed farming.
- Industry contributes around 10% of employment.
- Vulnerable to the effects of drought.

6





AGRICULTURAL PRODUCTION: EXPORTS

INDIGENOUS CROPS

- Research on the commercialization of indigenous plant material.

➢ Floricultural uses

➢ Medicinal Plants

➢ Indigenous Vegetables

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SUMMARY: PLANT PRODUCTION SECTOR

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•Grain	✓Largest
•Fruits, Ornamental plants	✓Export-driven
•Vegetables	✓Mostly for domestic market
• Indigenous crops	✓Needs development

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PLANT VARIETY PROTECTION SYSTEM: Legal Instruments

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NATIONAL LEGISLATION

- Plant Breeders' Rights Act, 1976 (Act no. 15 of 1976): provides a system where under plant breeders' rights of certain varieties may be granted or registered.
- Plant Improvement Act, 1976 (Act No 53 of 1976): Variety Listing providing legal control over the sale of propagating material of any plant variety of the kinds of plants that have been declared in terms of this Act.
- Intellectual Property Laws Policy: Plant Breeders' Rights Act to complement both the Biodiversity Act, 2004 and the Patents Amendment Act, 2005.

INTERNATIONAL LEGISLATION:

- UPOV Convention Act, 1978.

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PLANT BREEDERS' RIGHTS SYSTEM

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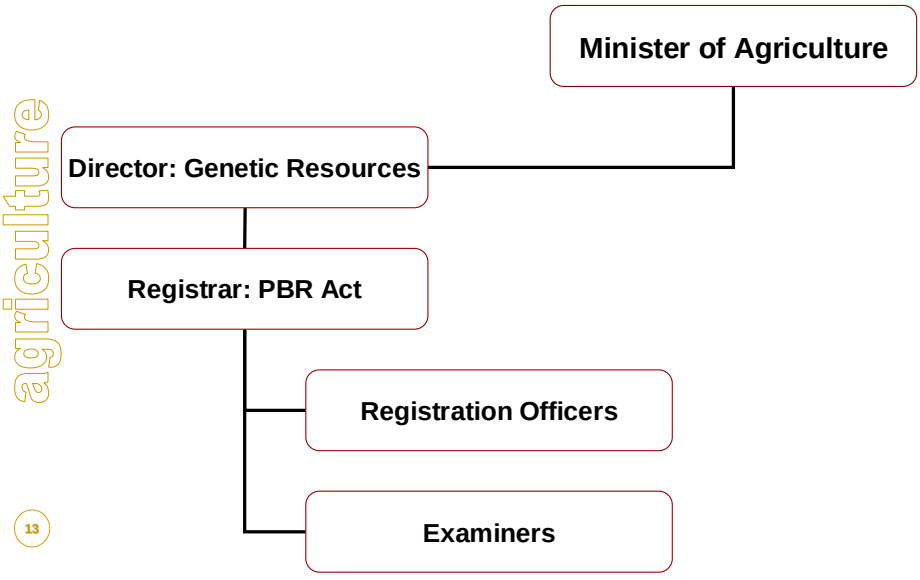

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ROLE OF THE MINISTER

- Appoints the Registrar: Plant Breeders' Rights Act
- Makes regulations to the Act
- Declares new kinds of plants
- Appoints an appeal board

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ROLE OF THE REGISTRAR

- Maintains Plant Breeders' Rights register
- Enters into agreements with other country to obtain/furnish DUS test results
- Verifies if applications conform to the requirements of the Act.
- Grants priority/provisional protections where applicable.
- Grants or refuses plant breeder's rights.
- Issues plant breeders rights certificates
- Publishes all particulars relating to plant breeders' rights.
- Terminates plant breeders' rights when required.
- Conducts hearings in cases of objections.
- Liaise with applicants and key stakeholders regarding administration of Act
- Ensures public understanding of the Plant Breeder's Rights Act

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ROLE OF THE REGISTRATION OFFICERS

- Register applications for Plant Breeders' Rights
- Process DUS reports
- Issue granting letter/rejection letter
- Update Plant Breeders' Rights register
- Issue invoices for the payment of annual fees for PBR.
- Compile information with regard to PBR for publication in the Plant Variety Journal and the Government Gazette.

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ROLE OF EXAMINERS: tests and trials for DUS testing

Official testing system	Breeder-based testing system
•Trials established at evaluation centers	•Breeder establishes trials on his premises according to official's instructions
•Authority maintains seed reference collections	•Relevant reference varieties preferably near candidate varieties
•All tests and trials at the evaluation center	•Officials visit trial site during the growing cycle
•Seed crops	•Fruit and some ornamental crops

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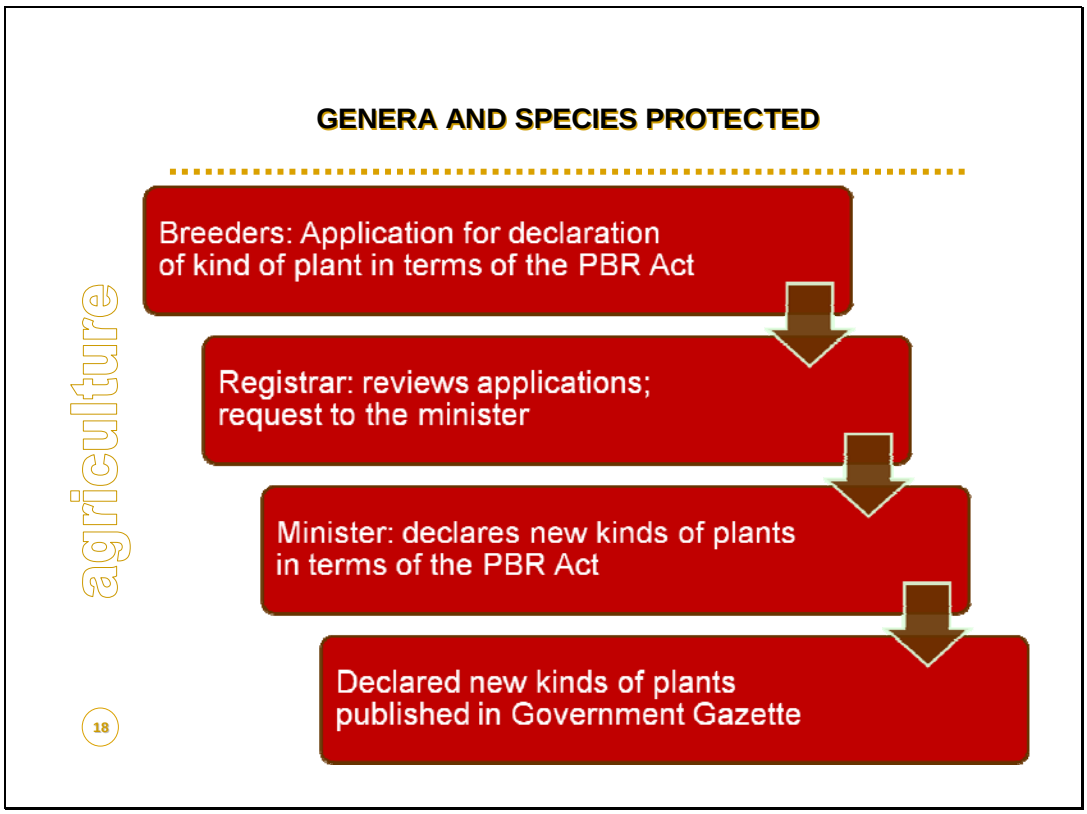
GENERA AND SPECIES PROTECTED
Breeders: Application for declaration of kind of plant in terms of the PBR Act
Registrar: reviews applications; request to the minister
Minister: declares new kinds of plants in terms of the PBR Act
Declared new kinds of plants published in Government Gazette
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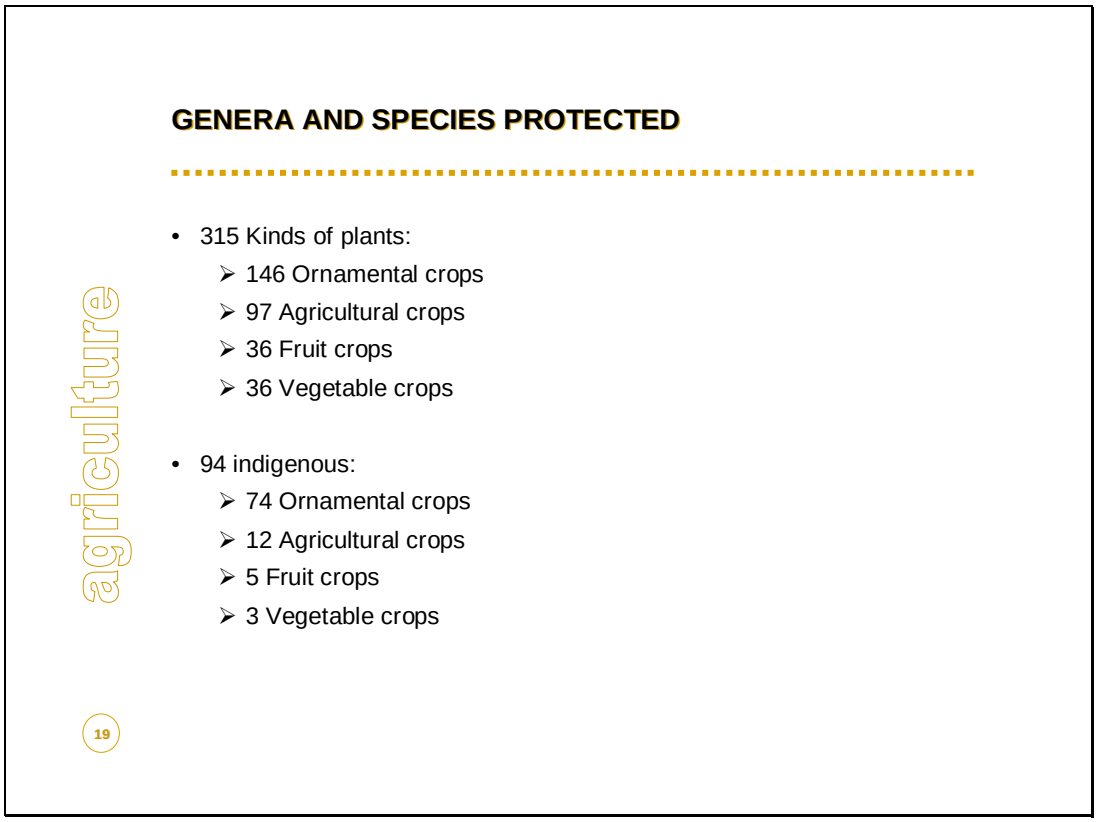
GENERA AND SPECIES PROTECTED
315 Kinds of plants:
146 Ornamental crops
97 Agricultural crops
36 Fruit crops
36 Vegetable crops
94 indigenous:
74 Ornamental crops
12 Agricultural crops
5 Fruit crops
3 Vegetable crops
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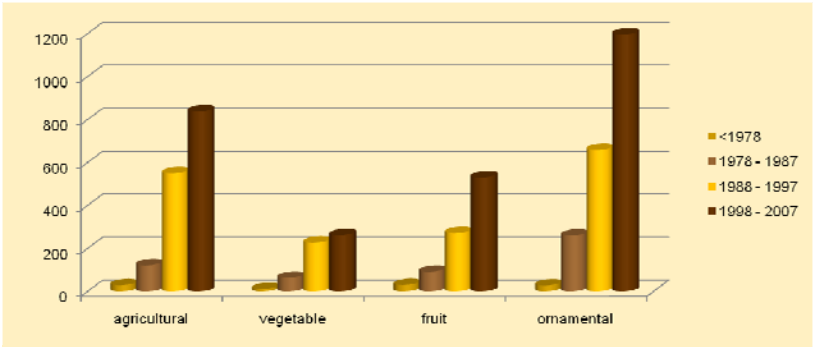
NUMBER OF APPLICATIONS

YEAR	AGRICULTURE	VEGETABLE	FRUIT	ORNAMENTAL	TOTAL
<1978	29	11	30	28	98
1978 - 1987	122	63	92	260	537
1988 - 1997	550	227	272	659	1708
1998 – 2007	838	262	531	1197	2828



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DOMESTIC BREEDING: NUMBER OF APPLICATIONS BY RESIDENTS IN THE LAST FIVE YEARS: TOP 10 CROPS

2003		2004		2005		2006		2007	
1. Maize	12	Rose	9	Wheat	12	Maize	18	Maize	33
2. Garden bean	10	Tomato	6	Soya bean	7	Nectarine	11	Grape	13
3. Wheat	7	Nectarine	6	*Aloe*	7	Grape	6	Tomato	10
4. Sweet potato	7	Maize	5	Maize	5	Garden bean	5	Peach	9
5. Marula	7	Soya bean	3	*Salvia*	4	Rose	4	Dry bean	7
6. Soya bean	4	Dry bean	2	Nectarine	4	Teff	4	*Aloe*	6
7. *Plectranthus*	3	Tobacco	2	Mango	4	Japanese plum	4	Sunflower	6
8. Apple	3	Sorghum	2	Dry bean	3	Squash	3	Sorghum	6
9. *Ornithogalum*	2	Potato	2	Sweet potato	2	Barley	3	Nectarine	6
10. Pumpkin	2	Japanese plum	2			Wheat	2	Pear	6

FOREIGN INVESTMENT: NUMBER OF APPLICATIONS BY NON-RESIDENTS IN THE LAST FIVE YEARS: TOP 10 CROPS

2003		2004		2005		2006		2007	
1. Rose	43	*Chrysanthemum*	56	Rose	17	Rose	35	Rose	31
2. Maize	25	Rose	45	Maize	15	Maize	27	Maize	30
3. Potato	12	Maize	14	Impatiens	12	*Impatiens*	14	Potato	20
4. Grape	13	Apple	13	*Lavandula*	10	Apple	8	Peach	17
5. *Verbena*	10	Strawberry	10	*Lolium multiflorum*	9	Nectarine	7	Nectarine	14
6. *Perlagonium*	10	Potato	9	Daisy bush	9	Peach	7	*Zantedeschia*	12
7. *Chrysanthemum*	7	Peach	8	Nectarine	8	*Lavandula*	7	Carnation	12
8. Mandarin	7	*Lolium multiflorum*	8	Lily	6	Potato	6	Tomato	10
9. *Rhododendron*	6	Lily	7	*Osteospermum*	6	*Zantedeschia*	6	Japanese plum	9
10. Lily	6	Sweet cherry	7	Lucerne	6	Strawberry	4	*Calibrachoa*	8

NUMBER OF VALID PLANT BREEDERS' RIGHTS (December 2007):

Crop Category	No. of PBRs	Residents	Non-residents
1. Agricultural	618	368	250
2. Fruit	313	187	126
3. Ornamental	813	121	692
4. Vegetable	206	101	105
TOTAL	1950	777	1173

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DOMESTIC GRANTS

INSTITUTIONS	No. of PBR
1. Public Research Institutions	
a) Agricultural Research Council	326
b) South African National Biodiversity Institute	5
2. Universities	15
3. Other	431

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NUMBER OF VALID PLANT BREEDERS' RIGHTS : TOP 10 AGRICULTURAL CROPS

Crop	No. of PBRs	Residents	Non-residents
1. Grain maize	122	56	66
2. Wheat	81	18	63
3. Potato	72	21	51
4. Soya bean	54	21	33
5. Dry bean	37	19	18
6. Rye grass	37	26	11
7. Lucerne	16	1	15
8. Oats	14	3	11
9.Sunflower	14	8	6
10. Rye	14	12	2

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SUMMARY

- The number of applications for protection continue to increase.
- Applications filed by non-residents are mostly for ornamentals.
- Applications for agricultural crops mainly filed by residents.
- Plant Breeders' Rights for locally-bred varieties in the hands of public institutions.
- Farmers have access to improved varieties.

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CONCLUSION

- Priorities in Agriculture
  - ➢ Increase yield per hectare for grains, fruits, industrial crops, flowers, and indigenous crops by10-15%.
  - ➢ Increase participation of emerging fruit, grain and vegetable producers in the formal market by 20% to 50%.
  - ➢ Increase quantities and types of indigenous crops sold in formal markets by 50%.
- Plant variety protection key in achieving these goals.

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[Annex IV follows]

ANNEX IV

Presentation made by the Office of the Union
at the oral report
on the latest developments within UPOV

RECENT DEVELOPMENTS IN UPOV

OVERVIEW

- UPOV Membership
- Time flexibility of UPOV sessions
- People & posts
- Distance learning / training trainers
- Symposium on contracts
- CBD letter
- OECD control plots
- Electronic application systems
- Explanatory notes (UPOV Convention)
- TC items beyond TWP agenda
- SADC meeting

MEMBERSHIP OF UPOV

65 Members

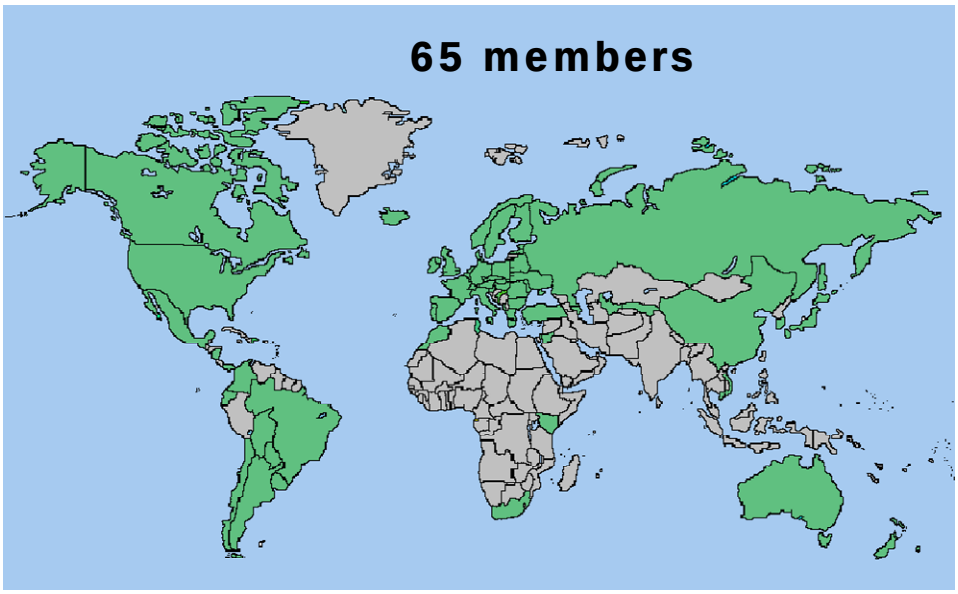
(64 States and the European Community)

New Members:

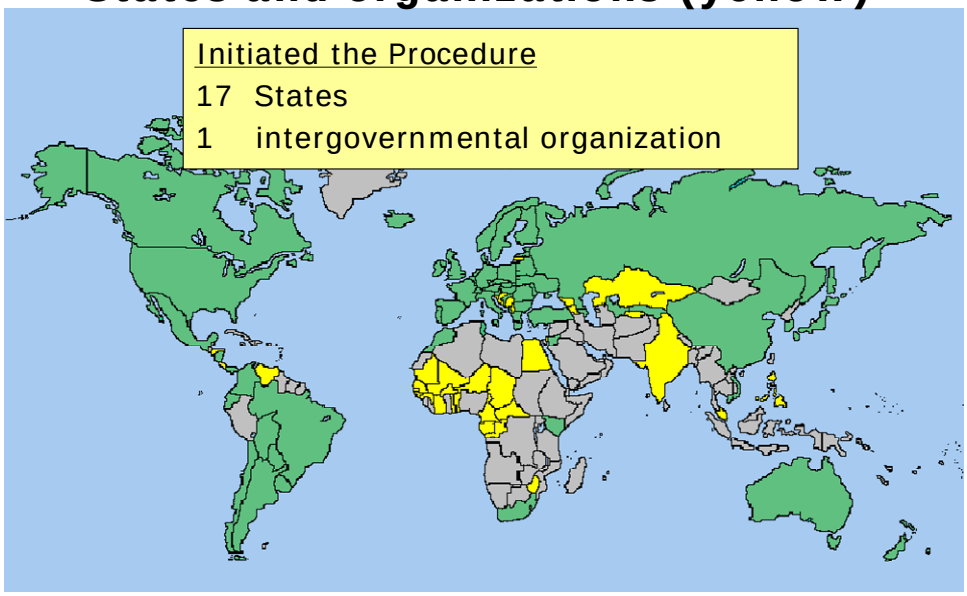
Turkey	November 18, 2007

Draft Laws examined	Council Session	Advice
Montenegro	October 25, 2007	amended Law to be submitted to Council
FYR Macedonia	April 11, 2008	amended Law to be submitted to Council
Serbia	April 11, 2008	positive (amendments of draft law required)
Montenegro	April 11, 2008	positive (amendments of draft law required)
Costa Rica	April 11, 2008	positive

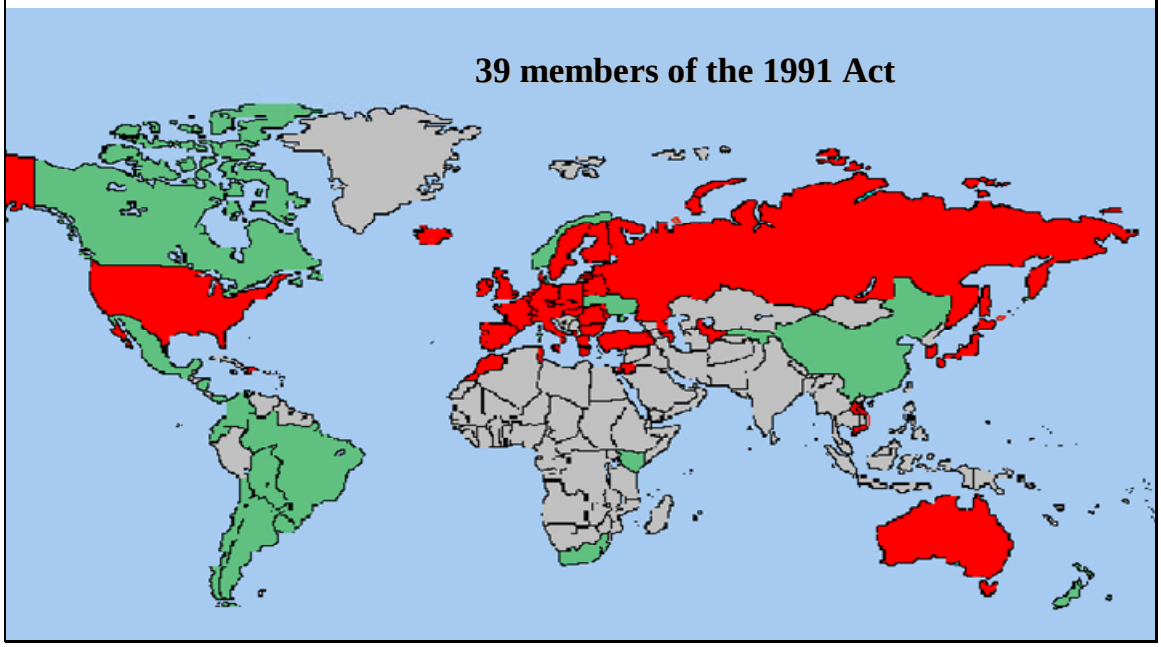
UPOV Membership / Territories covered



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



UPOV Membership Territories covered



COUNCIL (October 2007)

The Council elected, in each case for a term of three years ending with the forty-fourth ordinary session of the Council, in 2010:

(a) **Mrs. Carmen Amelia M. Gianni** (Argentina), **Chairperson of the CAJ** (Administrative and Legal Committee);

(b) **Mr. Lü Bo** (China), **Vice-Chairman of the CAJ**; and

(c) **Mr. Chris Barnaby** (New Zealand), **Chairman of the Technical Committee**.

In April, 2008, the Technical Committee *proposed to the Council* to elect:

Mr. Jöel Guiard (France),
Vice-Chairman of the Technical Committee.

COUNCIL (October 2007)

In recognition of his outstanding contribution to UPOV, the Vice Secretary General awarded to **Mr. Bernard Le Buanec**, Secretary General of ISF, a **UPOV Gold Medal**.

Consultative Committee

Efficiency, effectiveness and time flexibility of UPOV sessions

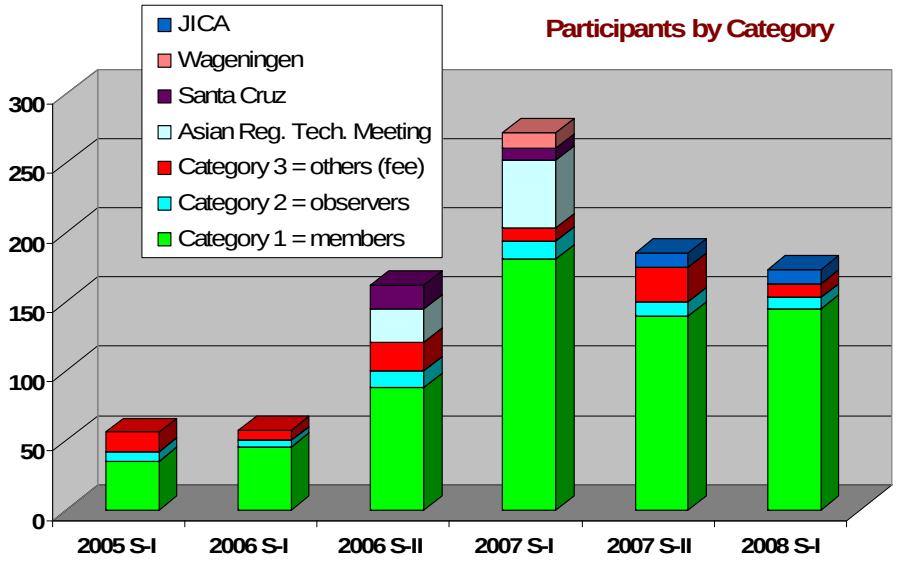
- Time flexibility after approval of calendar of meetings
- Preliminary examination (CC) and examination of laws (C); observers invited to comment
- Mailing concerning UPOV sessions: invitations and reports by electronic means exclusively

Consultative Committee

Distance Learning Course

noted the developments concerning the UPOV Distance Learning Course (DL-205)…

Distance Learning Courses



Consultative Committee

Distance Learning Course

noted the developments concerning the UPOV Distance Learning Course (DL-205)
and

endorsed the development of an advanced course **"Examination of Applications for Plant Breeders' Rights"** and entrusted the Office of the Union to take the necessary actions to develop and implement that course (will be based on TGP documents)

Training of Trainers in Plant Variety Protection (PVP)

USPTO, Washington, February 25 to 29, 2008

- 21 participants
- Purpose: provide training on the UPOV System of Plant Variety Protection, including presentation skills
- Enabling to act independently as trainer in seminars, workshops organized by UPOV and others using UPOV materials

Symposium on Contracts in relation to Plant Breeders' Rights

- Purpose: provide information to authorities and breeders on practices and experiences under different jurisdictions
- Date: October 31, 2008
- Venue: UPOV headquarters, Geneva

Letter to the Convention on Biological Diversity (CBD)

[…] the Council of UPOV […] decided to:

"request the Conference of the Parties of the Convention on Biological Diversity (CBD), at its Ninth Meeting, to consider the inclusion of the following elements in a decision relating to […] Access and Benefit-Sharing […]:

"1. In the first page (considerations):

Recognizing that UPOV supports the view that the Convention on Biological Diversity (CBD) and the UPOV Convention should be mutually supportive.[1]

"2. In the guidance for further negotiation of an international regime on access to genetic resources and benefit-sharing:

Further instructs the *Ad Hoc* Open-ended Working Group on Access and Benefit-Sharing that any provisions which it develops for an international regime on access to genetic resources and benefit-sharing should ensure mutual supportiveness with the UPOV Convention.[2]"

[1] UPOV's reply of 2003 is included in document UNEP/CBD/WG-ABS/3/INF/1 and can be found at: http://www.upov.int/en/news/2003/intro_cbd.html. See paragraph 3 of UPOV's reply of 2003.

[2] See paragraph 16 of UPOV's reply of 2003.

OECD: Technical Working Group on Varietal Purity and Varietal Identity

- Revision of characters for assessing varietal purity
- Based on UPOV Test Guidelines characteristics
- UPOV advice to consult DUS experts concerning use of characteristics not included in UPOV Test Guidelines

CAJ

ELECTRONIC APPLICATION SYSTEMS

Meeting (April 2008): two concrete proposals resulted from discussions:

(a) **survey on "core" questions** in the UPOV Model Application Form; and

(b) **pilot project**, for a small number of crops, consisting of a downloadable application form, with or without a technical questionnaire, for testing in cooperation with breeders' organizations and a number of authorities.

=>only **very limited interest**

on CAJ agenda October 2008 in order to review the situation

CAJ

INFORMATION MATERIALS:
EXPLANATORY NOTES ON THE UPOV CONVENTION

⇒ **Drafting guidance for Laws**

⇒ **Practical information for implementation**

Explanatory Notes

Article (1991 act)	April 2008	Oct. 2008
Article 1(iv): **DEFINITION OF BREEDER** (only breeder eligible for protection) Article 1(vi): **DEFINITION OF VARIETY** (variety ≠ protected variety)		First draft for **CAJ-AG**
Article 6: **NOVELTY** (acts which may be considered not to result in the loss of novelty)	**CAJ**	**CAJ**
Article 11: Right of **PRIORITY**		correspondence
Article 12: **EXAMINATION OF THE APPLICATION**	No further work (see TGP)	
Article 13: **PROVISIONAL PROTECTION**		correspondence

Explanatory Notes

Article (1991 act)	April 2008	Oct. 2008
Article 14(2): Acts in respect of **HARVESTED MATERIAL** / Article 16: **EXHAUSTION** of the Breeder's Right (authorization / permission: in UPOV member)	**CAJ-AG**	**CAJ-AG**
Article 14(5): **ESSENTIALLY DERIVED AND CERTAIN OTHER VARIETIES**	**CAJ**	CAJ to consider CIOPORA comments
Article 15: **EXCEPTIONS TO THE BREEDER'S RIGHT** (farm-saved seed)	**CAJ**	**CAJ**
Article 21: **NULLITY** Article 22: **CANCELLATION**		correspondence
Article 30(1)(i): legal remedies for the effective **ENFORCEMENT OF BREEDERS' RIGHTS** (list of possible measures)		**CAJ-AG**

Developments at the 44th session
(April 2008)

of the

TECHNICAL COMMITTEE

(not on the TWP agenda)

The Technical Committee proposed to the Council that it elect as:

- TC Vice-Chairperson: Mr. Joël Guiard (France)

Chairpersons -

- TWA: Mr. Dirk Theobald (European Community)
- TWC: Mr. Gerie van der Heijden (Netherlands)
- TWF: Mrs. Bronislava Bátorová (Slovakia)
- TWO: Ms. Andrea Menne (Germany)
- TWV: Mrs. Radmila Safarikova (Czech Republic)
- BMT: Mr. Andy Mitchell (United Kingdom)

and the TC appointed as Chairman of the

- *Ad hoc* Crop Subroup on Mol. Tech. for Wheat and Barley:
  Mr. Michael Camlin (United Kingdom)

DUS-related software

- information on existence and availability of **software** for example, **databases of images / photographs, image analysis** to be more **accessible to members** of the Union

- present information, on an **annual basis in a TC document**

- TWC to formulate the structure and content of the document for consideration by the TC at its forty-fifth session.

Test Guidelines adopted by Technical Committee in 2008

Status	Document No.	English	Drafter	TWP
complete	TG/16/8 Annex	Rice: example varieties (North East Asia)	JP/KR/CN	TWA
TWF check	TG/22/10(proj.3)	Strawberry	JP	TWF
TWO check (Ex.Vars)	TG/24/6(proj.3)	Poinsettia	DK	TWO
published	TG/40/7	Blackcurrant	NZ	TWF
published	TG/46/7	Onion, Shallot	NL/FR	TWV
published	TG/50/9	Grapevine	ES/DE	TWF
published	TG/60/7	Beetroot	NL	TWV
published	TG/78/4	Kalanchoe	DE	TWO
published	TG/85/7	Leek	NL	TWV
published	TG/152/4	Chamomile	DE	TWV
published	TG/176/4	Osteospermum	CA	TWO

Test Guidelines adopted by Technical Committee in 2008

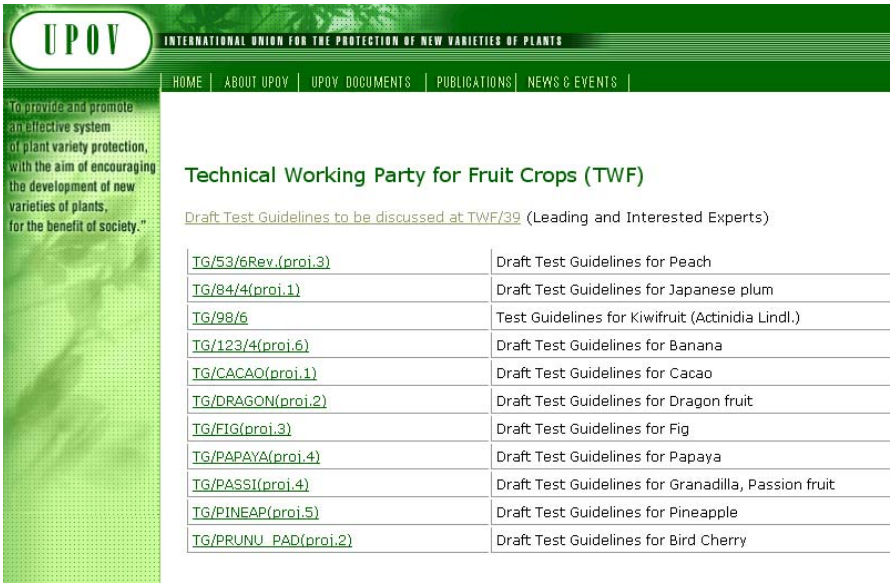
Status	Document No.	English	Drafter	TWP
published	TG/193/1	Lotus	UY	TWA
awaiting info	TG/AMARAN(proj.9)	Amaranth	MX	TWA
TWA/F check (*)	TG/COFFEE(proj.7)	Coffee	BR	TWA/F
published	TG/243/1	Festulolium	GB	TWA
published	TG/239/1	Hawthorn	MX	TWF/O
published	TG/240/1	Sea Buckthorn	SK	TWF
published	TG/241/1	Nemesia	GB	TWO
published	TG/242/1	Portulaca, purslane	JP	TWO/V
published	TG/244/1	Wild rocket	FR	TWV
published	TG/245/1	Garden Rocket	FR	TWV
published	TG/238/1	Tea	CN	TWA/O

Test Guidelines

- **249 Test Guidelines** adopted
- Further **62**# **to be discussed** in 2008
  (19 revisions / 43 new Test Guidelines)
  (29 "final" draft stage)

plus 2 short-notice partial revisions and 2 corrections (TWO)

TG Drafters' Webpage



Regional Training Course on Plant Variety Protection under the UPOV Convention for the Southern African Development Community (SADC)

Johannesburg, July 9 to 11, 2008

organized by

the International Union For the Protection of New Varieties of Plants (UPOV)

the Department of Agriculture of South Africa and

the United States Patent and Trademark Office (USPTO)

Regional Training Course on Plant Variety Protection under the UPOV Convention for the Southern African Development Community (SADC)

SADC Members

Angola
Botswana
Democratic Republic of the Congo
Lesotho
Madagascar
Malawi
Mauritius
Mozambique
Namibia
South Africa
Swaziland
Tanzania
Zambia
Zimbabwe

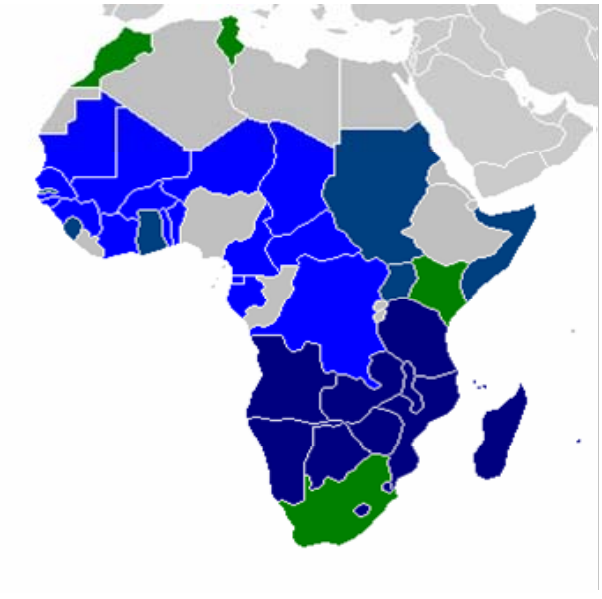
Regional Training Course on Plant Variety Protection under the UPOV Convention for the Southern African Development Community (SADC)

UPOV

OAPI

SADC

ARIPO



[Annex V follows]

ANNEX V

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 29, 2008

Species	Basic Document	Leading expert(s)	Interested experts (countries)
Pea (Revision)	TG/7/10(proj.5)	Mr. Niall Green (GB) (TWV)	AU, BG, CA, CN, DE, CZ, DK, EE, ES, FI, FR, GB, HU, NL, NZ, PL, QZ, SK, UA, ZA
Maize (Revision)	TG/2/7(proj.3)	Mr. Joel Guiard (FR) / Mr. Ferenc Kovàcs (HU)	AR, AT, BG, BR, CA, CN, CZ, DE[1], ES, GB, JP, KE, KR, MX, NL, PL, QZ, SK, UA, ZA
Swede *Brassica napus* L. var. *napobrassica* (L.) Rchb. (Partial revision)	TG/89/6 and TWA/37/8	Mr. Niall Green (GB) (TWV)	AR, DE, NL, QZ, UA, ZA

[1] Includes interest in sweetcorn

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/38
(* indicates possible final draft Test Guidelines)

New draft to be submitted to the Office of the Union
before July 17, 2009

(Guideline date for Subgroup draft to be circulated Expert: May 22, 2009
Guideline date for comments to expert by Subgroup: June 19, 2009)

Species	Basic Document	Leading expert(s)	Interested experts (countries)
Buckwheat (*Fagopyrum esculentum* Moench)	(TG/FAGOP (proj.2)	Mr. Masashi Noto (JP)	AT, CN, CZ, DE, FR, KR, PL, QZ, RU, UA, Office
Cassava (*Manihot esculenta* Crantz.)	New	Mr. Evans Sikinyi (KE)	TWV, BR, CO, Office
Common Vetch (*Vicia sativa* L.) (Revision)	TG/32/6	Mr. Luis Salaices (ES)	AR, AU, CZ, FR, PL, QZ, UA, ZA, Office
Durum wheat (Revision) (*Triticum durum* Desf.)	TG/120/3	Mr. Tanvir Hossain (AU) / Mr. Luis Salaices (ES)	AR, AT, (AZ), BG, BR, CA, CN, CZ, ES, FR, (HR), HU, (IL), JP, MX, (NZ), PL, (PT), QZ, RO, (RU), SK, UA, ZA, Office
*Flax, Linseed (Revision) (*Linum usitatissimum* L.)	TG/57/7(proj.2)	Ms. Laetitia Denecheau (FR)	AT, AU, BG, BE, CA, CN, CZ, DE, GB, HU, JP, NL, (NZ), PL, QZ, RO, (RU), SK, UA, Office
Foxtail millet (*Setaria italica* (L.) P. Beauv.)	TG/SETARIA (proj.2)	(Mr. Xianmin Diao) (CN)	AR, HU, JP, Office
Hemp (*Cannabis sativa* L.)	TG/CAN_SAT (proj.1)	Mr. Henk Bonthuis (NL)	AU, BG, BR, CZ, DE, FR, GB, HU, PL, RO, QZ, (RU), UA, ZA, Office
*Pearl Millet	TG/PRL_MIL (proj.5)	Mr. Luís Gustavo Asp Pacheco (BR)	AR, AT, ES, KE, MX, RU, UA, ZA, Office
*Sesame	TG/SESAME (proj.3)	Mr. Baruch Bar-Tel (IL) / Mr. Keun-Jin Choi (KR)	BG, BR, CN, JP, [KR], [IL], UA, Office
*Sweet potato (*Ipomoea batatas* (L.) Lam.)	TG/SWEETPOT (proj.3)	Mr. Keun-Jin Choi (KR)	AU, CA, CN, NZ, JP, KE, ZA, Office
**Urochloa (Brachiaria)*	TG/UROCH (proj.2)	Mr. Fabrício Santana Santos (BR)	AU, CO, MX, ZA, Office

[End of Annex V and of document]