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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Thirty-Eighth Session
Seoul, August 31 to September 4, 2009

REPORT

adopted by the Technical Working Party for Agricultural Crops

1. The Technical Working Party for Agricultural Crops (TWA) held its thirty-eighth session in Seoul, Republic of Korea, from August 31 to September 4, 2009. The list of participants is reproduced in Annex I to this report.

2. The TWA was welcomed by Mr. Cho Il-Ho, Director, Plant Variety Protection Division, Korean Seed & Variety Service (KSVS), Ministry of Food, Agriculture, Forestry & Fisheries (MIFAFF). A copy of the welcome address is provided in Annex II to this report.

3. In the absence of Mr. Dirk Theobald (European Community), Chairperson of the TWA, the session was opened by Mr. Joël Guiard (France) who welcomed the participants and, in particular, new participants to the TWA. The TWA session was chaired jointly by Mr. Guiard and Mrs. Beate Rücker (Germany),

Adoption of the Agenda

4. The TWA adopted the agenda as reproduced in document TWA/38/1 Rev., subject to the addition of document TWA/38/3 Add., under agenda item 5 on the basis of the program agreed by the TWA.

Short Reports on Developments in Plant Variety Protection

(a) Reports from members and observers

5. Mr. Keun-Jin Choi (Republic of Korea), Senior Examiner, Variety Testing Division, KSVS, MIFAFF, made a presentation on plant variety protection in the Republic of Korea, a copy of which is provided in Annex III to this document.

6. The expert from Argentina reported that the majority of protected varieties in Argentina were agricultural crops, specifically soybean, lucerne, wheat, corn (inbred lines) and sunflower (inbred lines). Concerning soybean, Argentina had carried out a collection of varieties to verify in the field the DUS requirements for variety protection. Argentina had also worked on the development of molecular techniques for soybean, developing DNA-fingerprints for all protected varieties in the country. The next step would be to develop the method to use molecular techniques in the management of collection varieties of soybean.

7. The expert from Australia reported on a new development in Australia's examination information system: in the previous session, he had reported about the Interactive Variety Description System (IVDS), which was a back-end database to capture the variety description in the standard UPOV format. In 2009, they had developed a new front-end database to utilize that information for examination purposes. This new front-end database was called 'Evock', which is an electronic information system for varieties of common knowledge. This database was still at the testing stage. However, it had shown a lot of potential in identifying the similar varieties of common knowledge based on the grouping of varieties. The expert indicated that it was a great information tool for our examiners and qualified persons (QPs). It was now possible to choose different thresholds for different characteristics and their states of expressions to broaden the search for varieties of common knowledge.

8. The expert from Brazil explained that his country was working on the revision of their legislation on plant variety protection to bring it in line with the 1991 Act of the UPOV Convention. He added that 1,787 applications had been filed since the beginning of the system and 1,268 plant breeder's rights had been granted. The three main crops were soybean, wheat and sugarcane. He further reported that ring tests had been carried out jointly with breeders in order to establish a set of example varieties for soybean, which would be published with the revision of their test guidelines for soybean and that similar work was under development for rice, cassava and urochloa.

9. An expert from China reported that the number of new applications for plant variety protection (PVP) in China had continued to increase substantially, with the number of applications for PVP increasing to 5,979 and 2,504 breeder's rights having been granted by the end of July 2009, amongst which, 5,241 applications and 2,327 rights granted were for field crops, comprising 87.7% and 93% of the total number, respectively. Thus far, the number of applications from foreign countries was 303. Because most applications from foreign countries had occurred in recent years and it would take 2 or 3 years for field DUS testing, the number of rights granted (44) for foreign breeders was not large. It was emphasized that the Ministry of Agriculture of China had changed the procedure for plant variety applications in the past year, which made the PVP office work more efficient. The result was that the management of most applications made in 2005 and 2006 had been finished, and 660 varieties had been granted a breeder's right, making 25% of the total number of plant variety protection granted in the past 10 years. This event signified that

agriculture crop variety protection had entered a new era in China. 2009 was the tenth anniversary of China becoming a UPOV member. In April, the forty-third session of the UPOV Technical Working Party for Vegetables (TWV), the ten year anniversary celebration for China becoming a member of UPOV, an international symposium on new plant variety protection and the second meeting of the East Asia Plant Variety Protection Forum were held in Beijing. Many UPOV members were invited to those meeting and conferences, all those meetings were successful and contributed to China's plant variety protection.

10. The expert from the Czech Republic reported that the number of applications for National Listing (NLI) and for PVP had been relatively stable for five years. In 2008, a total of 694 applications had been received for NLI, (GMO maize), 606 of which were for agricultural crops. As regards PVP, applications had been received for 68 varieties: 38 of agricultural species; 22 for ornamental species; and the remainder for fruit and vegetables. On the basis of administrative agreements, active cooperation in DUS testing continued with Austria, Hungary, Poland, Rumania, Slovakia and Slovenia. The agreement with Slovenian FURS was enlarged on grasses in 2009. There was participation in several R and D projects co-financed by the Community Plant Variety Office of the European Community (CPVO). In May 2009, a one-day seminar in Brno was organized in cooperation with CPVO. The main topics were farm save seed and the entrustment of the examination offices. Austria, Hungary, Slovakia and Poland took part. Two colleagues had participated in the DUS training course offered by Naktuinbouw in the Netherlands. In October 2009 a short training course on PVP for Croatian colleagues was being organized. It would focus especially on the infringement of breeder's rights and enforcement. Three colleagues from the DUS test department had participated in the DL-205 UPOV Distance learning course in Autumn 2008, meaning that all staff of DUS test department had obtained the DL-205 certificate. In 2008, UKZUZ had applied for certification according to international standard ISO 9001. The official audits had already been made by international agency TÜV without any serious remarks. A final decision on certification was awaited.

11. The expert from the European Community reported that, in 2008, the Community Plant Variety Office (CPVO) had received 3014 applications for Community plant variety rights (CPVR), a slight increase of 1% from the previous year, although it had granted fewer titles than in 2007. However, as a reflection of the global economic crisis, the CPVO had seen a substantial 20% decrease in the number of applications in the first six months of 2009, so it was anticipated that 2009 would probably be the first time that fewer applications for Community rights will have been filed with respect to the previous year. Following the implementation of the "one key, several doors" principle, whereby DUS test reports produced by any authority in the European Community are accepted for listing or protection purposes throughout the Community, an independent technical audit of the CPVO commenced operations in the September 2008. In this framework the CPVO's Administrative Council adopted rules for "quality requirements" in March. Therefore, the first quality audits with the assistance of external technical audit experts will commence later in 2009. Internally, the CPVO was establishing processes to become a "paperless" office, so that all documents would be scanned into its database and treated electronically. At the same time the CPVO was making good progress in being able to offer to applicants the possibility of e-filing by the end of 2009, which would enable an application for Community rights to be filed on-line via a secured site. As from 2010, the official Gazettes would not be printed, but become e-Gazettes. In September 2009, the CPVO would stage the Technical Working Party for Ornamental Plants and Forest Trees (TWO) in Angers, after having hosted the BMT in 2000, making it the first time it will have hosted a UPOV Technical Working Party. Applications in the agricultural sector in 2008 increased to an all-time high of 790, which was an 8% increase in

comparison to 2007, although the first half year of 2009 had seen a substantial 24% drop in agricultural figures in comparison to the same time in 2008. The most important species were maize and wheat, followed for the first time by potato on the third position. With respect to research and development (R&D) projects, the final reports of the following CPVO co-funded projects had been delivered: "Management of winter oilseed rape reference collection" and "Construction of an integrated microsatellite and key morphological characteristic database of potato varieties in the EU Common Catalogue". As a follow up of the projects, discussions within the expert groups were foreseen to be held. Two new proposals concerning wheat and barley were in the evaluation period for co-funding by the Advisory group for R&D projects.

12. The expert from Finland reported that the seed testing office of Finnish Food Safety Authority "Evira" had been accepted as an entrusted examination office for CPVO.

13. The expert from France reported on the transfer of GEVES from Versailles to Angers and its accreditation under ISO 9001 standards. A copy of the report presented by the expert from France is included in Annex IV to this report.

14. The expert from Germany reported that, since 2008, it was possible to file applications for plant breeder's rights and plant variety registration electronically.

15. An expert from Japan reported that a total of 23,874 applications had been filed in Japan during the period 1978 to 2008. The total number of protection titles granted was 18,154. In 2008, 1,246 applications were filed. That number reflected a decrease of 19% compared to 2007. 447 applications (37% of the total) were filed by foreign applicants. For food crop varieties, 1,208 applications had been filed. The total number of protection titles granted was 977. In 2008, 66 applications were filed for food crops. This number reflected a decrease of 25% compared to 2007. The average duration of the examination procedure (from application to registration), which was 2.6 years in 2008, was to be reduced to 2.5 years in 2009, in accordance with national objectives. It was decided to harmonize around 130 national test guidelines (out of 500) which overlapped with UPOV Test Guidelines; out of the 81 national test guidelines which had been harmonized since April 2008, 4 related to agricultural crops; namely, barley, oats, sunflower and broad bean. Others would be harmonized in the future. As part of the East Asian PVP forum, which was hosted by Japan in 2008, Japanese delegates had participated in the training program for Test Guidelines, DUS test techniques and examination techniques and the expert's conference on Test Guidelines and DUS test techniques. The second meeting of the East Asian PVP forum had been held in Beijing, China, in 2009, with a view to promoting cooperation activities for the development of plant variety protection. The expert also reported that in August, the internal organization of the Ministry of Agriculture, Forestry and Fisheries (MAFF) had been altered. The name had been changed from Plant Variety Protection and Seeds Division to the Intellectual Properties Division and the number of assistant examiners had been increased by five.

16. The expert from Kenya reported that, of all the applications filed for plant breeder's rights, 40% were from local applicants and 60% from foreign applicants, with 90% of the local applications being for agricultural crops. He added that, in Kenya, there was a lot of discussion on whether to modify the legislation on plant breeder's rights in conformity with the 1991 Act of the UPOV Convention. He concluded by reporting that, during 2008, Kenya had trained DUS examiners from neighboring countries.

17. The expert from Mexico reported that the Law in Mexico for the protection of Plant Breeder's Rights was issued in 1996, based on the 1978 Act of the UPOV Convention. Protection was offered for all genera and species. The Breeder provided the information that was the basis for granting protection. As a result of participation in the UPOV Technical Working Parties, Mexico had proposed Test Guidelines for Mexican species, such as Amaranth, marigold, husk tomato, hawthorn, papaya, theobroma, and dragon fruit. The principles and criteria of the Test Guidelines allowed them to be applied not only for Plant Breeder's Rights but also for the register and seed certification, where a plant variety description was required. That was the case for varieties of common knowledge like cactus pear (*Opuntia*), Tigridia, Mexican Lily (*Sprekelia*), Marigold (*Tagetes*) and *Agave tequilana* var. *Azul*. At July 31, 2009, 481 PVP titles had been granted, for 99 Corn varieties, 98 Rose and 49 Strawberry. The following detailed information was also provided:

PBR's Applications in Mexico[1]

Country	Number	%	Crops	Number	%
USA	407	36.93	Agricultural	463	42.01
Mexico	342	31.03	Ornamental	322	29.22
France	77	6.99	Fruit	201	18.24
Netherlands	170	15.43	Vegetables	113	10.25
Germany	39	3.54	Other	3	0.27
Others	67	6.08			
TOTAL	1102	100	TOTAL	1102	100
Applicant	Number	%	Agricultural	Number	%
INIFAP	152	13.80	Maize	244	55.83
Monsanto	100	9.07	Cotton	41	9.38
Pioneer	111	10.07	Sorghum	49	11.21
Meilland	62	5.62	Wheat	35	8.00
Driscoll Strowb.	65	5.90	Bean	15	3.43
Seminis	56	5.08	Rice	8	1.83
D&PL Tech.	36	3.27	Soybean	5	1.15
Jackson & P.	30	2.72	Amaranth	3	0.69
Other	490	44.47	Oats	4	0.91
			Chickpea	5	1.15
			Grasses (10 sp) [3]	20	4.58
			Other (4 sp) [2]	8	1.83
TOTAL	1102	100	TOTAL	437	100

[1] *At July 31, 2009.*
[2] *Barley, Sugar Cane, Tobacco and Triticale.*
[3] *Andropogon, Brachiaria, Bouteloua, Buchloe, Cenchrus, Cynodon, Eragrostis, Poa, Paspalum and Zoysia.*

18. The expert from New Zealand reported that applications for agricultural varieties had increased in the previous couple of years, after a period of decrease. Typically, applications were received for 30 to 40 agricultural varieties, with agricultural applications accounting for about 25 to 30% of the total number of plant variety rights (PVR) applications in New Zealand. Over the previous couple of years, the applications under examination for the grass endophyte (*Neotyphodium*) varieties had been tested. The DUS testing was divided into two stages. The first stage involved the DUS testing for a set of colony morphology characteristics. If a decision could not be reached on the basis of this first stage of testing for distinctness for a variety under test then further DUS testing based on the alkaloid profile was done. In total 7 candidate varieties had been tested with only one variety requiring further testing based on the alkaloid profile and PVR's had been granted for all the varieties under

test. After that initial round of testing a joint working group of applicants and the Plant Variety Rights Office (PVRO) had been formed and this group was in the midst of developing a comprehensive national testing guideline for *Neotyphodium* species (grass endophytes) including test protocols for both morphological and physiological characteristics.

19. An expert from Poland reported that the Research Centre for Cultivar Testing was responsible for the maintenance of the National List of Varieties and of the Register of PBR. It was responsible for DUS and VCU testing as well as for publication of Descriptive Lists (for main species of vegetables and fruit plants), post-registration variety system and variety recommendation. She further reported that Poland had bilateral cooperation agreements with many countries in the field of DUS testing, e.g. the Czech Republic, Hungary and Slovakia and conducted DUS testing for countries such as Lithuania, Latvia, Romania and also on behalf of the CPVO. By the end of 2008, there were 1,446 protected varieties, of which 889 were local varieties and 557 were foreign varieties. From that total of protected varieties, 646 were varieties of agricultural crops, 297 vegetable varieties, 383 ornamental varieties and 120 fruit varieties. In 2008, 28 applications for plant breeder's rights for agricultural crops had been filed. At the end of 2008, there were 2,413 varieties included in the National List, of which 1,201 were varieties of agricultural crops, 903 vegetable varieties and 309 fruit varieties.

20. An expert from South Africa reported that, in South Africa, to be eligible for protection in terms of the PBR Act, the plants from which new varieties were developed should be declared by the Minister in accordance with the regulations of the Act. The PBR Act in South Africa was being reviewed. At that time, there were approximately 360 taxa declared in terms of the PBR Act and they were grouped as follows : 53% ornamentals, 27% agricultural crops, 10% fruit crops and 10% vegetable crops. By December 2008, 2,076 varieties had valid PBRs in South Africa, as follows : agricultural crops had 713 varieties (34% of total), fruit had 349 varieties (17% of total), ornamentals had 762 varieties (37% of total) and vegetable varieties 252 (12% of total). About 60% of those varieties were owned by foreign nationals and 40% by locals. Of the locally owned varieties, about 15% were owned by public institutions. With regard to the agricultural crops, there had been an increase from 683 varieties with valid PBRs in 2007 to 713 in 2008. The top 3 agricultural crops with valid PBRs in 2008 were: maize (186 varieties), potato (81) and wheat (69). The Directorate Genetic Resources was facilitating the development of the Plant Variety Registration database, which was still at the developmental stage.

21. An expert from Spain reported that there had been an increase in the number of applications for plant breeder's rights for varieties of fruit crops, in particular, peach and citrus varieties. He added that there was a large increase in the number of applications for national listing of genetically modified varieties of maize. He reported that Spain had organized the eleventh session of the BMT, in Madrid, from September 16 to 18, 2008.

22. An expert from the United Kingdom reported that, on 1 April 2009, the United Kingdom Plant Variety Rights Office and Seeds Division had joined a new government science agency, the Food and Environment Research Agency (FERA). This had brought together policy responsibility for varieties and seeds and for plant health, and also a wide range of scientific research, including plant health, food safety, environmental issues, and some aspects of animal health. The new agency had its main laboratories and other facilities in York, with several other sites across England and Wales, including Cambridge where the varieties and seeds work continued to be located. FERA was one of the largest agencies of the Department for Food and Rural Affairs, contributing to the United Kingdom

government's objectives for a healthy natural environment, a sustainable resource efficient economy, a thriving and sustainable farming sector, and a secure food supply. In 2009, United Kingdom PBR applications had remained at a similar level to previous years and National List (NLI) applications overall had also remained steady at a level that was approximately five times as large as for PBR alone. The oilseed sector was currently very competitive and, despite a further reduction in the number of companies, National List applications had risen. Cereal National List applications had also remained steady, as had the herbage sector, despite a significant decline in company numbers in recent years. Overall, the current financial recession had not been reflected in the number of PBR or NLI applications during 2009. A second expert reported that the United Kingdom had recently received six new applications of winter wheat which had shown a new state of expression in CPVO/UPOV characteristic number 10G: "Straw: pith in cross section" (which is the thickness of the straw wall and is a grouping character). The new state was not currently covered by the United Kingdom or CPVO/UPOV protocols. The new varieties had shown a high level of within-plant variation for the characteristic, due to new breeding techniques. Discussions were to take place at the CPVO cereals expert's meeting in October to decide how to describe the new state in DUS reports and how to assess the varieties for DUS. In March 2009, the United Kingdom had completed the project "Functional SNP Markers for the Vernalization requirement in barley" funded by FERA. The project had assessed an Option 1a) approach in the form of a molecular assay for the direct replacement of field assessment for the UPOV characteristic and the final report would be presented at the next BMT in 2010. The project had been successful in developing a gene-based molecular marker assay that could be used to assess the different states of seasonal type in barley. They were now at a stage where they were considering plans for practical implementation after discussion and approval with the relevant bodies such as UPOV, CPVO and the United Kingdom National Listing and Seeds Committee.

23. The representative of the International Seed Federation (ISF) and the European Seed Association (ESA) reported that ISF had revised its position paper on the use of DNA-markers in DUS testing in order to respond to developments in UPOV concerning the proposal for maize developed by France. A copy of that position paper is attached as Annex VII to this document. The interface between patents and plant breeder's right was a major topic of discussion in ISF and ESA. ISF and ESA had held a joint meeting with patent examiners from the European Patent Office (EPO) in 2008 in order to raise awareness amongst patent examiners of the state of the art in plant breeding. It was reported that EPO did not consider that hybrids were varieties and, therefore, it was possible to obtain a patent on hybrids. The representative explained that ISF and ESA planned to have a similar meeting with examiners from the United States Patent and Trademark Office (USPTO). Further, with regard to the interface between patents and plant breeder's right, it was explained that there were ongoing discussions in ISF and ESA concerning access for germplasm in relation to material covered by patents. ESA planned to revisit its position paper on that subject by October 2010, to coincide with a review of the plant breeder's rights system in the European Community.

(b) Reports on developments within UPOV

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

25. With regard to the Germplasm Information on Germplasm Accessions (GIGA) project, the UPOV experts nominated to Bioversity for that project reported that they had not been

contacted. The Office of the Union agreed to check with Bioversity on progress with the project and when the UPOV experts were likely to be contacted.

Molecular Techniques

(a) Developments in UPOV concerning the use of molecular techniques

26. The TWA received a report on developments in UPOV concerning the use of molecular techniques, as set out in document TWA/38/2.

27. The TWA noted that International Seed Testing Association (ISTA) had been unable to attend the eleventh session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT), held in Madrid, from September 16 to 18, 2008. It was agreed that the Office of the Union should contact ISTA to investigate how the work of UPOV and ISTA might, where appropriate, be coordinated.

(b) Ad hoc *Crop Subgroups*

28. In response to the invitation of the TC, the TWA agreed to propose Mrs. Laetitia Denecheau (France) as new Chairperson of the Crop Subgroup for Oilseed Rape.

29. With regard to future meetings of the *Ad Hoc* Crop Subgroups on Molecular Techniques (Crop Subgroups), the TWA noted the following:

Crop Subgroup for Maize (Chairperson: Mrs. Beate Rücker (Germany)): no subgroup meeting planned. The Office of the Union to contact the American Seed Trade Association (ASTA) to see if it would be interested in receiving a report on the outcome of the consideration within UPOV on the approach presented in documents BMT/10/14 and BMT-TWA/Maize/2/11 “Possible use of molecular techniques in DUS testing on maize: how to integrate a new tool to serve the effectiveness of protection offered under the UPOV system” at the meeting of the maize and sorghum breeders’ meeting in the United States of America in 2010;

Crop Subgroup for Oilseed Rape: (Chairperson: see above)no subgroup meeting planned on the basis that new developments are not foreseen in the short term;

Crop Subgroup for Potato (Chairperson: Mrs. Beate Rücker (Germany)): no subgroup meeting planned. To consider a future meeting according to developments in on-going projects reported at the eleventh session of the BMT;

Crop Subgroup for Soybean (Chairperson: Mr. Marcelo Labarta (Argentina)): to consider a meeting in conjunction with the twelfth session of the BMT, proposed to be held in Canada, from May 11 to 13, 2010, to include a report on the work of Argentina

and Brazil in the context of a possible Option 2 approach; and

Crop Subgroup for Wheat and Barley (Chairperson: Mr. Michael Camlin (United Kingdom)): no subgroup meeting planned. Any on-going work, such as the work in France on barley in the context of a similar approach to that presented for maize in document BMT/10/14, would be reported at the twelfth session of the BMT.

TGP Documents

30. The TWA considered the TGP documents below on the basis of document TWA/38/3.

(a) New TGP documents:

31. The TWA considered documents TGP/8/1 Draft 13, TWA/38/3 and TWA/38/3 Add., and made the following comments:

	underlined text: addition; ~~strikethrough text~~: deletion
	PART I: DUS Trial Design and Data Analysis
Introduction	To read: "PART II: TECHNIQUES USED IN DUS EXAMINATION: provides details on certain techniques referred to in documents TGP/9 "Examining Distinctness", and TGP/10 Examining Uniformity where further guidance is considered appropriate. ~~It should be noted that the techniques included in Part II are not the only techniques that are suitable for use in the DUS examination. For example, DUS expert observation is an important technique but is not included in document TGP/8.~~"
1.3.1.1	Last sentence to read: "…However, for example, it may be considered appropriate to conduct tests at more than one place for the following purposes:" To explain the need that before using more than one location the interaction genotype-environment has to be considered
1.3.2.2	To be deleted
1.3.2.3 Title (a)	To read: "(b) Additional tests ~~DUS examined using characteristics examined at different locations"~~
1.3.2.3	To read: "For example, additional tests (see section 1.6) *[cross ref.]* may be carried out to examine particular characteristics e.g. greenhouse tests for disease resistance, laboratory tests for chemical constituents etc. In such cases, the data for particular characteristics can be obtained at a different location to the main growing trial. ~~In other cases, reserve trial data may be available for some or all characteristics which could not be observed in the growing trial at the primary location. In cases where the data for the characteristic(s) are obtained exclusively from the reserve trial, the situation is similar to that for an additional test, although it would be important to record that the variety description for the characteristics concerned was not based on the normal (primary) location. The situation where data from different locations (i.e. the primary location and reserve location) for the same~~

	~~characteristic are combined is covered in paragraph (c).~~
1.3.2.4, 1.3.2.5	To delete reference to descriptions in 1.3.2.4 and 1.3.2.5 and make a new paragraph dealing with descriptions
1.5.2	Title to read: "1.5.2 Number of Plants <u>in the trial</u>"
1.5.2.1	The number of plants~~/parts of plants to~~ in the trial ~~examined~~ is influenced by several factors such as genetic structure of the variety, way of reproduction of the species, the agronomic features and the "feasibility" of the trial. The most significant criteria to determine the number of plants are, the variability within and between varieties, and the method of assessment of distinctness and uniformity.
1.5.2.2	to be deleted
1.5.2.3	to be deleted
1.5.2.4	to be deleted
1.5.3	To include incompletely randomized trials (to cover grouping) in a future version of TGP/8.
1.5.3.1.7 (table)	Agreed with TWC that the title of third row to read "Variety mean / Statistical analysis of records for a group of plants / [Replicate plots for group data records] / (MG/MS)
1.5.3.1.7 (table)	Agreed with TWC to explain the terms MG, MS, VG, VS
1.5.3.3.2	Agreed with TWC to delete this paragraph
1.5.3.3.4.6	Agreed with TWC that the second sentence to read "The blocks should be formed so that the variation between plots within each block is minimized.
1.5.3.3.7.4	Agreed with TWC to delete this paragraph
1.6	To be moved earlier in the structure
1.7	To read: "1.7 Changing Methods Changes in the methods of assessing DUS may have a significant impact on decisions. Therefore, due consideration should be given to seeking to ensure that there is consistency in decisions ~~and that applicants are aware of the changes to the method~~
2.1.1	Correct paragraph numbering
2.3	Agreed with TWC: first paragraph to be deleted
2.3.1 (title)	Agreed with TWC to delete "[/variety means]"
3.1	Agreed with TWC to delete note in box
3.2.1.3 (b)	Accept the text proposed by the TWC subject to the deletion of the phrase <u>"where there are at least a certain minimum number of varieties in trial</u>."
3.2.1.3 (c)	Accept the text proposed by Nik Hulse (Australia) to refer to "growing cycle" instead of "year of testing" or "year"
3.2.1.4,	Agreed with TWC to be deleted and to be replaced by an explanation that "In

3.2.1.5	the context of consistency and harmonization, it should be noted that different statistical methods will produce different results."
3.3 (title)	Agreed with TWC to read "Summary of selected statistical methods for examining distinctness"
3.3.1	To delete the table and to read "Selected techniques used in DUS examination"
	PART II: Techniques Used in DUS Examination
1	Second sentence of first paragraph: to check whether the term "originality" is correctly used or should be replaces.
1.1.3	To read: "A DUS examiner may have a situation where two varieties receive ~~a~~ different notes ~~(e.g. Variety A is Note 3 for a given characteristic and Variety B is Note 4)~~, but the two varieties are considered by the examiner to be similar. The difference could be due to the fact that the varieties were not grown very close each other (i.e. had different environmental conditions), or to variability of the observer when assessing the notes, etc.
1.3.1	To add the following text at the beginning of the section: "It is important to take care of the correlation between characteristics when weighting. If two characteristics (e.g. two plant heights) are linked, it is advised to use only one of them in GAIA to avoid double weight."
1.3.4.1	to refer to test guidelines rather than crop guidelines
3.1	To maintain the recommendation of 20 degrees of freedom and to include the recommendation of the TWC in a future revision of TGP/8
4.1.1	the TWA did not agree with the TWC proposal to add indent to read "– there are at least 10, and preferably at least 20, degrees of freedom"
4.2.1	To clarify that it is not the residual of the individual plants what should be used
4.2.2	Agreed with TWC to delete final sentence of second indent
5.1 and 5.2	Agreed with TWC delete section 5.1 and 5.2
	The TWA considered the revised Section 5 presented in the Appendix to the Annex of document TWA/38/3.
5	Sections 5.1 and 5.2to be moved as new sections after Section 6 under the title Match Approach
5.3	To become section 5 Pearson's chi-square test
6	Introductory paragraph to read: Fisher's Exact Test is a statistical test used in the analysis of categorical (qualitative) data where the number of samples (i.e. sample size) is small ~~and is named after its inventor, R.A. Fishe~~r. Fisher's Exact test applied to 2 x 2 contingency tables is useful where; observations on a characteristic are allocated to two or more categories (classes) - the only source of variation should be caused by random sampling, e.g.

	there should be no variation due to soil conditions, etc. - the expected values in each category are less than 10
6.1.1	To delete: "as it is usually quicker to calculate"
6.1.2. Example 1	To make it a general example, i.e. not to refer to lucerne
6.1.4	The TWA did not agree with the proposed deletion in this paragraph in reply to the comments made by Mr. Kristian Kristensen (Denmark)
6.1.5	To add the following text at the end of the paragraph: "In this case, the probability is calculated as the sum of the probabilities for each possible event that is as larger or larger than the observed. Consequently, in addition to the observed, the number of dark blue flowers that would give a successful outcome would be 9,10 or 11 for Variety 1 and 2, 1 or 0 for Variety 2."
6.1.9	To have p=0.05 in the second sentence and to replace "distinct" by "distinguishable" in the third sentence.
6.2	To be deleted
7.1.5	Correct paragraph number in the title
7.1.5.2	To change the population standard to 10% and the acceptance probability to 95%.
7.1.5.3	second line, to read figures "(1 to 7)"
7.1.6	Title to read: "Method for one single test"
7.1.7	Title to read: "Method for more than one single test (year)"
7.1.8	To delete title
8.1	To explain the notion of "reference variety" in COY" in the document.
9.1	The TWA agreed to the TWC comment that the title to read "Uniformity assessment on the basis of relative variance method"
9.1	Introduction to read: " The relative variance for a particular characteristic refers to the variance of the candidate divided by the average of the variance of the reference varieties (i.e. Relative variance = variance of the candidate/average variance of the reference varieties). The data should be normally distributed. The relative variance method may be applied to any measured characteristic that is a continuous variable, irrespective of the method of propagation of the variety."
9.1.2	To be deleted
9.2.1	Table 1; to delete the rows for sample size 10, 15, 20, 25
9.3.1	To include guidance on the minimum number of reference varieties to be included in the trial
9.3.2	To be deleted

9.4.5	To delete example 2
9.5.2	Table 4; to delete the rows for sample size 10, 15, 20, 25
9.6	Agreed with TWC to delete the section

32. The TWA did not consider document TWA/38/10 in detail.

TGP/11 Examination of Stability

33. The TWA noted the developments concerning document TGP/11/1 Draft 5, as set out in document TWA/38/3.

34. The TWA noted that document TWA/38/3, paragraph 18(f) explained that, in addition to guidance on the examination of stability through the examination of uniformity, the next draft of document TGP/11/1 should provide guidance on the direct examination of stability, with the assistance of experts from Australia. The TWA heard that the expert from Australia would provide information to the expert from the European Community.

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

35. The TWA considered documents TWA/38/3, TGP/14/1 Draft 9,TGP/14/1 Draft 9 Supp. and TWA/38/11 Rev., and agreed the following with regard to document TGP/14/1 Draft 9:

General	
	in the future revision (TGP/7/3), with particular regard to Section 3 "Statistical Terms", to update terms that have recently been added to TGP/14 and to delete terms that are not used in UPOV documents
Section 2: Subsection 2: I Shape	
1.3	*TWV comment: to introduce the possibility to provide a different definition for the terms "base" and "apex" where that would be appropriate for the Test Guidelines concerned, in particular to avoid confusion in the use of commonly used terms by breeders. On that basis, it was agreed that the definitions of the terms should always be provided in the Test Guidelines. Furthermore, in order to ensure that applicants used the correct terms in completing the Technical Questionnaire, it was agreed that the relevant illustration of shapes in the Test Guidelines should be added to the Technical Questionnaire.* TWA: noted

1.5	*TWV comment: to retain the states "small" and "large" for ratio, but to add a clarification in brackets, e.g. for ratio length/width, to have "small (moderately compressed)", "large (moderately elongated)" etc.* TWA: the TWA agreed that it would not be appropriate to introduce the possibility to have multiple terms for the same state of expression. It recalled that Chapter 8 provided the opportunity to provide a clarification of the states of expression, whilst noting that the states should be as clear as possible for applicants in the Technical Questionnaire.
1.5 (second)	*TWV comment: (after Chart for Other Plane Shapes) to remove reference to a decision-tree* TWA: agreed
2.10	*TWV comment: to update cross-references* TWA: agreed
<u>Section 3 "Statistical Terms"</u>	
	the TWA noted the amendments proposed by the TWC

(b) Revision of TGP Documents:

TGP/7 Development of Test Guidelines

36. The TWA made the following comments on document TGP/7/2 Draft 3 and on the comments made by the TWV and TWC in document TWA/38/3:

General	*TWC comment: to replace "range of variation" with "level of variation", or where the General Introduction is quoted, to explain that the term "level of variation" is considered to be more appropriate than the term "range of variation", which has been used in the General Introduction (see, for example, Chapter 6.4).* TWA: noted
<u>Section 1</u>	
1.2	to move to the end of TGP/7
1.2	*TWV comment: to explain the importance for harmonization of variety descriptions of using the Test Guidelines as individual authorities' test guidelines. In cases where that would not be possible, to encourage the inclusion of references to the characteristic number in the Test Guidelines in the individual authorities' test guidelines.* TWA: agreed
1.2.1.2	second sentence to read "Therefore, each authority may decide to request a larger quantity of plant material, for example to allow for potential losses during establishment or for a standard sample."

1.2.1.5	*TWV comment: to clarify that the harmonization of variety descriptions could be lost if different example varieties are used in individual authorities' test guidelines* TWA: noted
1.2.1.7	*TWV comment: to amend to cover information provided by breeders in a breeder testing system* TWA: noted
1.2.1.7	to explain that it may still be useful to develop a national set of example varieties in cases where example varieties are provided in the Test Guidelines or if a regional set of example varieties has been developed.
1.2.1.9	to be retained and final sentence to read "In the interim, members of the Union may indicate in DUS reports that the characteristic in the individual authorities' test guidelines has some differences to the characteristic in the Test Guidelines, pending consideration of a revision of the Test Guidelines by the Technical Committee."
1.2.1.10	to delete "including means of ensuring that applicants are aware of such changes."
1.2.1.11	to add that, according to national requirements, the authority's technical questionnaire may request additional information to that requested in the Technical Questionnaire of the UPOV Test Guidelines
2.2.4.4	*TWV comment: to read "In advance of the TWP session, the leading expert should prepare a preliminary draft of the Test Guidelines ("Subgroup draft") for comments by the subgroup. On the basis of the comments received from the subgroup, the leading expert should establish a first draft for the TWP. This draft is sent to the Office which will produce a document for distribution to the members of the TWP(s) concerned for discussion at their session(s). Prior to the TWP session, the Office will make a preliminary check that the draft has been prepared according to document TGP/7 and, in particular, that it conforms with the TG/Template (Annex 1 [cross ref.]). A result of that check will be provided to the Leading Expert at least one week before the session. […]* TWA: agreed
Annex 1: TG Template	
2.3	*TWV comment: Netherlands to develop draft guidance on the quantity of plant material to be provided for Test Guidelines, for consideration at the forty-fourth session of the TWV with a view to its inclusion in a future revision of TGP/7 (document TGP/7/3)* TWA: noted
4.1	*TWV comment: to develop ASW for the assessment of distinctness of hybrids using the parental formula, on the basis of the wording in the Test Guidelines for Maize.* TWA: agreed

Annex 2: Additional Standard Wording (ASW) for the TG Template	
ASW 8	to add ASW for assessment of uniformity of ear-row / panicle row plots as follows: "For the assessment of uniformity of [plants, parts of plants] / [ear-rows] / [panicle-rows], a population standard of { x }% and an acceptance probability of at least { y } % should be applied. In the case of a sample size of { a } [plants, parts of plants] / [ear-rows] / [panicle rows], [{ b } off-types [plants, parts of plants] / [ear-rows] / [panicle-rows] are] / [1 off-type [ear-row] / [panicle-row] is] allowed." "[An ear-row] / [A panicle-row] is considered to be an off-type [ear-row] / [panicle-row] if there is more than one off-type plant within that [ear-row] / [panicle-row]"
ASW 8	to develop ASW for specific characteristics that might be observed on different sample sizes
ASW 8	to introduce following ASW for hybrid varieties where parental formula used: "Where the assessment of distinctness of hybrids involves a pre-screening system on the basis of the parental lines and formula, the uniformity of a hybrid variety should, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity of its parent lines."
ASW 13	*TWV comment: to include an indication that the parental formula would be used where this ASW is applicable* TWA: agreed
ASW 15	to delete version (b) and move ASW 15(a) to the TG Template
Annex 3: Guidance Notes (GN) for the TG Template	
GN 9	to add the ISBN number for the "Growth stages of mono-and dicotyledonous plants - BBCH Monograph"
GN 19 (3)	to add an example to clarify the meaning
GN 20 (3.1)	to complete all states, i.e. including the even states, in the "length of stem" example
GN 20 (3.7)	to delete Example 1
GN 26	to explain that it is more appropriate to use the chronological order if groups of characteristics are to be observed at the same time
GN 28	*TWV comment: the TWV noted that it would not be able to review any proposed amendments to GN 28 before the Technical Committee considered the approval of document TGP/7/2 in 2010. The TWV noted the importance of example varieties in Test Guidelines for vegetable crops and generally supported the text in GN 28. Therefore, to avoid a delay in the adoption of document TGP/7/2, it proposed that document TGP/7/2 should be adopted in 2010 without amendments to GN 28 and*

	that any proposed amendments should be considered in a future revision of document TGP/7, if appropriate. TWA: agreed and also agreed to add an agenda item to discuss example varieties at its thirty-ninth session
GN 31	*TWV comment: to add the possibility to indicate that the variety is a parent line, with a reference to document TGP/5 "Experience and Cooperation in DUS Testing", Section 11/1 "Examples of Policies and Contracts for Material Submitted by the Breeder", which explains in paragraph 1.1 that "[…] in the particular case of parent lines submitted as a part of the examination of a candidate hybrid variety, living plant material should only be made available to other variety collectors in such a way that the legitimate interests of the breeder would be safeguarded."* TWA: the TWA did not agree that it was necessary to make such an indication in the Technical Questionnaire for a parent line submitted as a part of an application for a hybrid variety because the information concerning such parent lines would be included in a single application for the hybrid variety.
GN 32	*TWV comment: Three-Way Hybrid: to add a line to enter the name of the female hybrid parent* TWA: agreed
Annex 4: Collection of approved characteristics	
General	the TWA noted that document TWA/38/3, paragraph 31, explained that the "TC 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.". It heard that the experience of the Office of the Union was that the collection of approved characteristics was not, in general, used by Leading Experts in the drafting of Test Guidelines and agreed that it would not be a good use of resources to invest a substantial effort in its development for the time-being.

37. The TWA noted that the Office was compiling a historical list of adopted Test Guidelines and was also intending to make all previous adopted versions of Test Guidelines available in electronic form in the future.

38. The TWA noted the program for the development of TGP documents, agreed by the TC at its forty-fifth session, as set out in document TWA/38/3.

Variety denominations

39. The TWA considered document TWA/38/5.

40. The TWA endorsed the proposal of the Technical Committee that Class 202 in document UPOV/INF/12/1, Part II "Classes encompassing more than one genus", be extended to cover Megathyrsus, Panicum, Setaria and Steinchisma.

41. With regard to the botanical reclassification of “Tomato” in the GRIN database from “Lycopersicon esculentum Mill.” to “Solanum lycopersicum var. lycopersicum”, the TWA proposed that a separate denomination class be created within *Solanum* (e.g. Class 4.3), in order to avoid difficulties for denominations for other species (e.g. *Solanum melongena* L.) within *Solanum*.

42. The TWA noted that UPOV codes were only changed where botanical reclassifications had consequences for variety denomination classes and made a change necessary for UPOV purposes, because there were implications for databases. It further noted that, in the future, UPOV codes that were deleted from the GENIE database would, as a result of the program of improvements for the Plant Variety Database, be identified and reported to contributors.

Exchangeable software

43. The TWA noted the information provided in documents TWA/38/8 and UPOV/INF/Software Draft 2.

Electronic application systems

44. The TWA considered document TWA/38/9

45. The expert from Australia reported that all the UPOV Test Guidelines had been developed into an interactive electronic format and explained that the system used for that process was available to the Office of the Union.

46. The TWA noted that a number of members of the Union had developed, or were developing, electronic application systems, a key feature of which was the linkage to their databases that allowed automatic completion of certain fields for existing applicants: it was noted that such a feature could not be provided at the UPOV level. The representative of ISF recalled that a number of members of the Union had not yet developed electronic application systems and reported that ISF had agreed, under certain conditions, to make a financial and resource contribution to the development of a standard electronic application form.

47. An expert from the Republic of Korea explained that another aspect to be considered was the need to address applications by local and foreign applicants using different languages.

Method of calculation of COYU (document TWA/38/16)

48. The TWA noted the information provided in document TWA/38/16.

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

49. The TWA considered document TWA/38/12.

50. The TWA agreed that the draft questionnaire presented in document TWA/38/12 should, before the example, present a blank questionnaire to clarify the questions on which information was requested. The TWA considered that the decision rule presented in the

example in the Annex to the document was not clear and proposed that it be clarified, particularly for the decision rule at the end of each growing cycle, and agreed that reference should be made to growing “cycles” rather than “years”.

51. The TWA considered that the experts from each Technical Working Party should be invited to complete the questionnaire with information for relevant crops / species. In that regard, it agreed that the TWA experts should be invited to supply information on potato and wheat or, if not suitable for the member of the Union concerned, to complete the questionnaire for another vegetatively propagated root crop and self-pollinated cereal.

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

52. The TWA received a report from Mr. Edilberto Redoña, International Rice Research Institute (IRRI), concerning the development of a set of example varieties for rice for South-East Asia. A copy of the presentation made by Mr. Redoña is provided as Annex VI to this report. He recalled that the focus of the project was to develop a set of example varieties for the asterisked characteristics in the UPOV Test Guidelines.

53. The representative of the Food and Agriculture Organization of the United Nations (FAO) requested information on whether the project would help to reduce the time for introducing new varieties. Mr. Redoña explained that the project would facilitate the registration of varieties, which would help to reduce the time for the introduction of new varieties. However, he clarified that the project on example varieties was a very small part of the work of IRRI, which had country- and region-specific breeding programs dedicated to the development of new varieties for a range of countries. An expert from France recalled that IRRI and the authorities of the members of UPOV were working to facilitate the development of new varieties of plants in cooperation with breeders.

54. In response to a question from the expert from the Netherlands, Mr. Redoña clarified that the example varieties under consideration were freely available and were maintained.

55. Mr. Redoña noted that there were a number of states that were not represented by example varieties and wondered if further work was needed to provide example varieties for those states. The Chairman clarified that it was not always possible, and not necessary, to find example varieties for all states of expression.

56. Mr. Luis Salaices (Spain), Leading Expert for the adopted Test Guidelines for Rice thanked Mr. Redoña for his work and congratulated him on the success that he had achieved. He confirmed the importance of the project for UPOV.

57. Mr. Redoña explained that the work on the development of example varieties would continue in 2009, but requested guidance on whether further work would be required beyond that time, for example to develop a set of example varieties for all 65 characteristics in the UPOV Test Guidelines. The TWA agreed that, as a first step, it would be appropriate to consider the data that had been collected in the project, before deciding how best to continue.

58. The TWA thanked Mr. Redoña for his report and agreed to invite him to present the full results for consideration at its thirty-ninth session.

Proposal for a Partial Revision of the Test Guidelines for Wheat

59. The TWA considered document TWA/38/14, introduced by Ms. Jennifer Jebson (New Zealand)

60. The TWA noted that the Test Guidelines for Wheat had last been revised in 1994 and that the discussions on the draft Test Guidelines for Durum Wheat had indicated that there were some other aspects, in addition to grain color, that should also be revised. On that basis, the TWA agreed to schedule a full revision of the Test Guidelines.

61. With regard to partial revisions of Test Guidelines, whilst recognizing the need to consider each situation on its merits, the TWA agreed that, in general, changes to states of expression of a single characteristic should be reported by means of the form in "Section 10: Notification of Additional Characteristics", of document TGP/5 "Experience and Cooperation in DUS Testing". All such changes could then be accumulated and incorporated in a single revision, thereby minimizing the number of revisions required for the Test Guidelines.

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

62. The TWA considered document TWA/38/15.

63. The TWA noted the comments from Ukraine in response to the circular issued to the TWA and TWV on February 27, 2009. On the basis of the explanation provided by Mr. Niall Green in his letter of April 14, 2009, the TWA agreed that the Test Guidelines for Pea should be adopted with changes to the Test Guidelines for Pea agreed by the Technical Committee at its forty-fifth session.

Discussion on Draft Test Guidelines

Buckwheat

64. The subgroup discussed document TG/FAGOP(proj.3), presented by Mr. Masashi Noto (Japan), and agreed the following:

1	To read "These Test Guidelines apply to all varieties of *Fagopyrum esculentum* Moench (syn. *Fagopyrum sagittatum* Gilib.)."
5.3	To delete "(e) Fruit: weight per 1000 fruits (characteristic 20)" and to designate characteristic 21 as (e) and characteristic 22 as (f)
Table of characteristics	
New	To add characteristics "Flower: size" and "Plant: growth type"
Char. 1	add (+) with explanation using standard explanation from other UPOV Test Guidelines
Chars. 4, 5 and 6	To be moved after ch. 16

Char. 6	To have note MS instead of VS
Char. 7	To be moved before characteristic 2
Char. 8	To add note (a) and a drawing section 8.2
Char. 9	To add a drawing in section 8.2, example varieties for the rest of states of expression and to check the number of notes
Char. 11	To b indicated as PQ
Char. 12	To read “petals” instead of “petal”
Char. 13	To have notes 1-2-3
Char. 14	To read: “Plant: total number of flower clusters and to have notes 1-2-3
Char. 15	To read: “Plant: number of flower clusters above upper node of main stem”
Char. 16	To delete: “intensity of” from the wording and to be indicated stage of development “51” instead of “65”.
Char. 19	Stage (3) to read “medium brown”
Char. 21	To read: “Time of beginning of flowering” and to delete stage of development 61
8. Explanations on the Table of Characteristics	
New	To add section “8.1 Explanations covering several characteristics” with: “(a): all observation on leaves should be observed on leaves from the middle part of the plant” for characteristics 8-9 and 10
Ad. 4	To delete the sentence, drawing enough
Ads. 4.5.6 and 7	To be deleted
Ad. 15	To have notes 1-2-3
8.3	To delete: stage 61 beginning of flowering
10 Technical Questionnaire	
1.1	To read: “*Fagopyrum esculentum* Moench (syn. *Fagopyrum sagittatum* Gilib.).”
5	To update 5.3-5.4 and 5.6 as per changed in table

Cassava

65. The subgroup discussed document TG/CASSAV(proj.1)), presented by Mr. Evans Sikinyi (Kenya), and agreed the following:

	underlined text: addition; ~~strikethrough text~~: deletion
1	To read: “These Test Guidelines apply to all varieties of *Manihot esculenta* Crantz. In the case of ornamental varieties, it may, in particular, be necessary to use additional characteristics to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability.”
2.3	To read: “2.2 The material is to be supplied in the form of cuttings.”

2.3	To read: “2.3 The minimum quantity of plant material, to be supplied by the applicant, should be: 30 cuttings, each one of 40 cm. length with 5 to 8 buds”
3.4.1	20 plants instead of 50
3.5	To read: “ Unless otherwise indicated, all observations on single plants should be made on ~~30~~ 10 plants or parts taken from each of ~~30~~ 10 plants.
4.2.2	To read: “For the assessment of uniformity of inbred lines, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of ~~50~~ 20 plants, ~~two~~ one off-type~~s~~ ~~are~~ is allowed.
5.3	To reconsider when de table will be more advanced
Table of characteristics	
General	To change all VS to VG in throughout the table
Char. 2	To be deleted
Char. 3, 4 and 5	To be indicated as VG instead of VS
Char. 6 and 7	To be indicated as VG instead of VS and BR and KE will observe in their trials
New	To read: “Leaf: sinuosity of lobe”, with states of expression “absent” (1) and “present” (9), with notes VG and (b) and BR to provide example varieties
Char. 10	To add (+) and provide illustration and to clarify that the observation is in the central lobe.
Char. 13	To read: “Petiole: attitude in relation to stem” with states semi-erect (1), horizontal (2), drooping (3), irregular (4) and to be indicated PQ
Char. 14	To read: “Petiole: stipules:” and BR, KE and MX to check whether different lengths or absent-present
Char. 15	To check environmental influence and to change state in Add 15
Char. 16	State 4 to be moved before state 1
Char. 17	BR, KE and MX to check example varieties and exchange information
Char. 19	To add example varieties and to check if true QL
Char. 20	To read: “…leaf scars on nodes..”
Char. 21	BR, KE and MX to check if good ch. for DUS
Char. 22	BR, KE and MX to Exchange information on example varieties
Char. 23	To have states Absent (1) - Present (9), to add explanation and to be indicated as QL
Char. 24	BR, KE and MX to propose example varieties for all states
Char. 25	BR, KE and MX to propose example varieties for all states and to add explanation and diagram
Char. 26	BR, KE and MX to propose example varieties for all states and to add explanation and diagram

Char. 27	to check whether 2 states of expression appropriate and to check whether QL
Char. 29	To delete the asterisk
Char. 30 and 31	To check if good characteristic for DUS. If accepted to be indicated as QN
8. Explanations on the Table of Characteristics	
Ad. 5	To be displayed as a grid and state 10: to add illustration of single leaflet
10 Technical Questionnaire	
6	To add example

Common vetch. (Revision)

66. The TWA considered document TG/32/7 (proj. 1), presented by Mr Luis Salaices (Spain), and agreed the following:

General	To provide example varieties ES, FR to exchange material of example varieties and AU to provide example varieties to Spain and France
3.3.2	To be deleted
6.5	To read: "(a)-(d) See Explanations..."
Table of characteristics	
Char. 1	To have the states very compressed (1) to very elongated (9)
Char. 5	To delete VG
Char. 6	To add a definition of "upper nodes"
Char. 13, 14 and 15	To add a drawing to explain the measurements
Char. 15	To have states 1-2-3
Char. 16	To add same explanation as TG for peas
Char. 18	To have the states: circular (1); elliptic (2); oblong (3)
Char. 19	To consider greyish green (1); greyish brown (2); brown (3); blue black (4) (no hyphens)
Char. 20	To have states "absent"(1); "spotted"(2), "blotched"(3) and "speckled"(4)
Char. 21 and 23	To explain the meaning of "extension"
Char. 22	To have states "absent"(1); "dotted"(2), "blotched"(3) and "speckled"(4)
Char. 24	To delete hyphen in grey-brown
8. Explanations on the Table of Characteristics	
8.1	To define "Time of flowering"
5	To include example varieties when included in the table

7	To delete: “A representative color photograph of the variety should accompany the Technical Questionnaire.”

Durum wheat (Triticum durum *Desf.*) *(Revision)*

67. The subgroup discussed document TG/120/4(proj.1), as presented by Mr. Tanvir Hossain (Australia), and agreed the following:

2.3	- minimum quantity of material to be indicated as 5 kg of seed - to add option for 100 ears to be provided and to provide the appropriate provisions in Chapters 3 and 4, according to the approach used in the Test Guidelines for Common Millet (TG/248/1)
3.3.4	reference to spaced plants to be deleted
3.3.5	to be deleted
3.5	to read “Unless otherwise indicated, all observations for distinctness on single plants …”
new 4.2.3	to read “For the assessment of uniformity of characteristics on ear-rows, plants or parts of plants (visual assessment by observations of a number of individual ear-rows, plants or parts of plants) the number of [aberrant] / [off-type]* ear-rows, plants or parts of plants should not exceed 3 in 100.” * to be discussed in TWA plenary session - to be replaced by new wording proposed by TWA (see paragraph 36, ASW 8 (above))
6.5 & Table of Chars.	“GS” to be deleted and to make reference to Chapter 3.3.2
Table of Chars.	- example varieties should be protected or included in a national list. Consideration of how to provide example varieties from different regions to be discussed in conjunction with TGP/7 - to check all “VS” indications
Char. 1, 2, 7, 9	to delete “intensity of”
Char. 2	to amend “10-11” to “10”
Char. 4	text in brackets to be moved to Ad. 4
Char. 9	to be deleted
Char. 13	add (+) with explanation of “height” (natural height as opposed to length)
Char. 14	(*) to be deleted, to be indicated as PQ and to replace illustration with photographs
Char. 15	to be indicated as QN and to read “Ear: length of awns at tip relative to length of ear”

Char. 16	to be indicated as VG, to check whether to be indicated as QN and to add (+) and provide illustration
Char. 20	to be indicated as QN
Char. 22	to be indicated as QN and to have notes 1, 2, 3
Char. 23	to check whether to change “brown” to “medium purple” and “black” to “dark purple”
Char. 26	to be deleted
Char. 28	to be indicated as QN and to replace “amber” with “dark brown” (state 3) and “light yellow” with “light brown” (state 2)
Char. 29	to be deleted
Char. 30	to have notes 1, 3, 5, to be indicated as VG
Char. 31	to be deleted
Char. 32	to be indicated as MS/VG and to have notes 1, 3, 5
Char. 33	to be indicated as MS/VG and to have notes 1, 3, 5
Chars. 34, 35, 36	to be deleted
Char. 37	to be indicated as VG
Char. 38	to change “B” to “C” and add (+) with explanation of how to examine
Chars. 39, 40	to be deleted
Char. 40+1	to check whether to have notes 1, 2, 3 or 1, 3, 5
Char. 40+2	to retain and to investigate appropriate states

*Flax, Linseed (*Linum usitatissimum *L.) (Revision)*

68. The subgroup discussed document TG/57/7(proj.3), as presented by Mrs. Laetitia Denecheau (France), and agreed the following:

3.4.1	to read “Each test should be designed to result in a total of at least 1,000 plants, which should be divided between at least two replicates.”
5.3	to add a reference to Chapter 8.2 (b) for Char. 21
Table of Chars.	further example varieties to be provided
Char. 3	to read “Corolla: arrangement of petals” and to use illustration from TGP/14 (Version 2)
Char. 4	to read “Corolla: color”

Char. 5	to be indicated as MS/VG and to check whether there is strong correlation with Char. 7
Char. 6	to read "Excluding varieties with corolla color: white: Flower : shape of the corolla heart"
Char. 10	to be indicated as QL
Char. 13	confirmed to be deleted. It was noted that authorities would have the possibility to use the characteristic as an additional characteristic, if considered appropriate.
Chars. 18, 19	to explain that the top boll should be observed for these characteristics
Char. 24	to be indicated as QL
Chars. 25, 26, 27	to add note (b) and to specify that a single seed should be taken from each top boll in the sample
8.1	to be deleted
8.2 (b)	table to be deleted and explanation to read "(b) To be observed for long and medium type varieties with brown seed color only. Based on characteristic 21 (Stem: length from cotyledon scar to first branch), varieties are classified as short type varieties (Note 1-4), medium type varieties (Note 5) and long type varieties (Note 6 – 9). The observation of petal length, petal width, boll length and boll width is not appropriate for short type varieties, nor for varieties with yellow seed color."
Ad. 1	to keep only one illustration, to show the bud stage
Ad. 16	to indicate ciliation of septa with arrow
9.	to add reference for Keefe
TQ 4.2.2	to be deleted
TQ 6	example to be provided

*Foxtail millet (*Setaria italica *(L.) P. Beauv.)*

69. The subgroup discussed document TG/SETARIA (proj.3 Rev.), as presented by Mr. Xianmin Diao (China), and agreed the following:

Cover page	English common names: to check whether to add "Foxtail Bristle Grass" German common names: to check whether to add "Italienhirse"
3.4.1	second sentence to be deleted
3.4.3	to be moved before 3.4.2
4.2.2	second sentence to read "In the case of a sample size of 1,000 plants, 15 off-types are allowed."
5.3	to have the following as grouping characteristics: Chars. 2, 6, 16, 21, 32 and 34
Char. 2	to read "Seedling: anthocyanin coloration of basal leaf sheath" and to add (*)

Char. 3	to read “Foliage: intensity of green color”
Char. 5	to check whether to read “Plant: anthocyanin coloration of collar” and to have the states: absent or weak (1); moderate (2); strong (3)
Char. 6	- to delete “45” and text in brackets and add (+) with explanation that the time of heading is when 50% of plants are at stage 45 - to be indicated as MG
Char. 7	to be deleted
Char. 8	- to explain where to observe the characteristic - to have the states: erect (1); semi erect (2); horizontal (3); slightly drooping (4); moderately drooping (5); strongly drooping (6)
Char. 10	- to read “Panicle: length of bristles” and to add explanation that the bristle is formed by the sterile spikelet - to have the states: very short (1); medium (3); very long (5)
Char. 11	to read “Panicle: anthocyanin coloration of bristles”
Char. 13	to be indicated as MG
Char. 14	to be indicated as MG and add (+) with explanation to be observed at the broadest part of the blade
Char. 15	to read “Flag leaf: anthocyanin coloration of blade”
Char. 16	to read “Plant: length” and to be indicated as MG
Char. 17	to be indicated as MG, TO add (+) with explanation of where to observe and to have notes 1, 3, 5
Char. 19	(*) to be deleted
Char. 21	to be indicated as MG, (*) to be deleted and to add (+) with explanation that it should be observed on spaced plants
Char. 22	state 7 to read “moderately drooping”
Char. 23	to be indicated as MG and to provide explanation to observe from the base of the panicle to the flag leaf node
Char. 25	to be indicated as MG
Char. 26	to be deleted
Char. 27	to read “Excluding varieties with panicle shape: branched: Panicle: density” and to provide an illustration
Char. 28	to provide an illustration
Char. 29	to be deleted
Char. 31	to have the states: narrow ovate (1); medium ovate (2); round (3)
Char. 32	to check states, e.g. white or whitish, whether to add brown. State 3 to read “medium yellow”
Char. 33	to read “Dehusked grain: color (not polished)” and to have the states: white (1); light yellow (2); medium yellow (3); grey (4)

Char. 34	to have notes 1 and 2, but to check whether it is a QL characteristic (see Test Guidelines for Rice)
Ad. 8	illustration to be provided for state 3
Ad. 19	to provide explanation or photographs
Ad. 20	to provide explanation or photographs
Ad. 23	to move explanation of Char. 16 to Ad. 16
Ad. 25	to provide illustration
Ad. 26	to provide illustration
Ad. 31	photographs to be kept, but illustrations to be deleted
TQ 4.2	to be completed
TQ 5	to have the following characteristics: Chars. 2, 6, 16, 21, 32 and 34
TQ 6	example to be provided
TQ 9.3	to be deleted

Hemp

70. The subgroup discussed document TG/CAN_SAT(proj2), presented by Mr. Henk Bonthuis (Netherlands), and agreed the following:

3.4.1	To read: “In the case of seed propagated varieties, each test should be designed to result in a total of at least 200 plants, which should be divided between 2 replicates.”
3.4.2	To read: “In the case of vegetatively propagated varieties, each test should be designed to result in a total of at least 40 plants.”
3.4.3	To delete: “and observations on border plants should be avoided” at the end of the paragraph
4.2	To include probability standard and number of male plants to be accepted
4.2 (b)	Ask Hungary to provide information on the type of hybrids and their uniformity levels
Table of Chars.	
Char. 1	Example variety to read “Uso 31” instead of “Yuso 31” and to check whether “elliptic” is the correct shape
Char. 2	To add example varieties
Char. 3	To delete “intensity of” from the wording of the characteristic
Char. 4	State (3) to read “medium green”
Char. 5	To be deleted (same as characteristic 4)
Char. 8	To have note MG instead of VG

Char. 13	To have note MG instead of VG and to look for information from other countries on the assessment of this characteristic
Char. 15	To consider 3 states of expression and to delete the figures from the explanation. Example varieties will provide the guidance to assess the states of expression
Char. 17	To be deleted
Char. 19	To delete states (2) and (3) and to check example varieties
Char. 23	To use “thin/thick” for the wording of the states of expression and to delete state (2)
Char. 25	State (2) to read “medium grey”
Char. 26	To read: “Seed: marbling”
Char. 27	Leading expert to provide better explanation
Char. 28	To be deleted
“Main stem: technical length”, “Inflorescence: length” and “Inflorescence: density” not to be included	
8.2 Explanations for individual characteristics	
Ad. 15	To delete the table “States of expression for range of THC content:”
Ad. 22	Add explanation for state 1

Pearl Millet

71. The subgroup discussed document TG/PRL_MIL(proj.6) as presented by Mr. Luís Gustavo Asp Pacheco (Brazil), and agreed the following:

2.3	to replace “1 kg” with “500 g”
6.5	to add “(S): Possible segregation in three-way and double-cross hybrid varieties”
Char. 1	- to read “Seedling: anthocyanin coloration of basal leaf sheath” - to add example varieties: ANSB Milheto Okashama (1); Ipa Bulk 1 (3)
Char. 2	to have the following example varieties: ADR 300 (1) ANM 23 (3)
Chars. 3, 4	to be indicated as MG
Char. 3	to have the following example varieties: ADR 300 (3), ADR 7010 (7)
Char. 4	to have the following example varieties: ANSB Milheto MC (3), ADR 500 (5), ANM 6123 (7)
Char. 5	to have the following example varieties: ANSB Milheto MC (1), ADR 500 (2), ANM 23 (3)
Char. 7	to add “(S)”
Char. 8	to have the following example varieties: ANSB Milheto Okashama (3), BRS 1501 (5), ANM 17 (7)
Char. 9	to have the following example varieties: ADR 300 (1), ENA 1 (9)

Char. 10	to have the following example varieties: ANSB Milheto Okashama (3), ADR 500 (5), ADR 7010 (7)
Char. 11	to reverse order of states 2 and 3
Char. 12	to be indicated as MG and to have the following example varieties: ANSB Milheto Okashama (3), ADR 500 (5), ENA 1 (7)
Char. 13	to be deleted
Char. 14	to be indicated as MG and to have the following example varieties: ANSB Milheto MC (3), ANM 17 (5), ADR 7010 (7)
Char. 15	to have the states: weak (1); moderate (3); strong (5)
Char. 17	to move after Char. 20 and to have the following example varieties: BRS 1501 (3), IPA Bulk 1 (7)
Char. 19	to have the following example varieties: ANSB Milheto Okashama (3), IPA Bulk 1 (7)
Char. 20	to have the following example varieties: ADR 500 (3), ADR 7010 (7)
Char. 21	to be indicated as MG and to have the following example varieties: BRS 1501 (3), ENA 1 (5), ADR 500 (7)
Char. 22	- (+) to be deleted and to be indicated as MG - to have the following states and example varieties: few (1) (ENA 1); medium (2) (ADR 500, IPA Bulk 1); many (3) (ADR 300)
Char. 23	add (+) with explanation to observe on fourth node from ground and to have the following example varieties: IPA Bulk 1 (5)
Char. 24	to have the following notes and example varieties: ENA 1 (1); ANM 23 (2); IPA Bulk 1 (3)
Char. 25	to have the following example varieties: ENA 1 (3); ADR 300 (5); ANM 6123 (7)
Char. 27	to add “(S)” and state 1 to read “whitish”
Ad. 2	illustration to be provided
Ad, 3, 4	to read “To be observed on the fourth node from the top, on the main culm.”
Ad. 11	to reverse names of states 2 and 3, but illustrations to be kept in same position
Ad. 22	to be deleted
Ad. 26	to modify the illustration for state 2 to show only the outline of the caryopsis and to delete illustrations of non-circular caryopses in state 3
8.2	in illustration, header to read “DS-3: panicle initiation”
TQ 6.5	example: Time of flowering / very early / early

Sesame

72. The subgroup discussed document TG/SESAME(proj.4), as presented by Mr. Keun-Jin Choi (Republic of Korea), and agreed the following:

4.3.2	" or plant" to be deleted
5.3	(b) and (e) to be deleted
Char. 2	- to be indicated as QN and information in brackets to be moved to Chapter 8 (Ad. 2) - to add (+) and provide illustration - to have notes 1, 3, 5
Char. 3	to reverse order of state 2 and 3 and to provide illustration
Char. 4	to be indicated as VG/MG
Char. 5	to be indicated as VG
Char. 6	text in brackets to be deleted and to be indicated as MG/VG
Char. 7	to be deleted if no example varieties provided
Chars. 8, 9, 10	to be indicated as MG/VG
Char. 13	- to read "Leaf blade: anthoycyanin coloration" - to check whether to have the states absent or weak (1); moderate (2); strong (3) - to check whether the example varieties would be different for Char. 16 and, if not, to retain only one characteristic
Char. 14	to add (+) and provide illustration and/or explanation
Char. 15	to add note (b)
Char. 16	- to check whether to have the states absent or weak (1); moderate (2); strong (3) - to check whether the example varieties would be different for Char. 13 and, if not, to retain only one characteristic
Char. 17	- to add note (a) and to provide explanation - to check whether more than 2 states exist and to check whether QL, with particular reference to varieties in Japan
Char. 18	(+) to be deleted
Char. 19	to read " …intensity of pink color…", to add note (a) and to have notes 1, 2, 3
Char. 20	to read " …intensity of pink color…", to add note (a) and to have notes 1, 2, 3
Char. 21	to have notes 1, 3, 5
Char. 22	to be indicated as QL, to add (+) and provide illustration and to have notes 1, 9
Char. 23	to add (+) with explanation of carpels and Japan to check whether there are example varieties for more than 3 carpels

Char. 24	to provide illustration and example varieties
Char. 25	to delete " maximum", to provide illustration and example varieties
Char. 26	to be indicated as VG and to have notes 1, 3, 5
Char. 27	to be indicated as PQ, to move yellow to state1 and example varieties to be provided
Char. 28	to check whether QL and whether example varieties exist for "absent" (dependent on the definition of ripening)
Char. 29	to add intensities for relevant colors (e.g. light brown, medium brown etc.) and to be indicated as PQ
Char. 30	to be deleted
Char. 31	example varieties to be provided
Char. 32	explanation to be provided
Char. 33	explanation to be provided
Ad. 1	illustration for state 2 to be replaced
Ad. 7	if Char. 7 retained, to provide explanation from Test Guidelines for Pea, with arrow to indicate fasciation
Ad. 11	text before illustration to be deleted
Ad. 31	to provide illustration for single varieties
9.	to be formatted according to TGP/7
TQ 4.2	to be reviewed
TQ 5.4	to be deleted
TQ 6	example to be provided

*Sweet potato (*Ipomoea batatas *(L. Lam.))*

73. The subgroup discussed document TG/SWEETPOT(proj.4) as presented by Mr. Keun-Jin Choi (Republic of Korea), and agreed the following:

5.3	*TWV comment: to delete characteristics 8 and 17 and add characteristic 9* TWA: agreed
Table of Chars.	*TWV comment: to delete all references to countries in parentheses after example varieties* TWA: agreed
Char. 8	*TWV comment: to be indicated as VG and state 1 to read "absent or sparse"* TWA: agreed
Char. 9	*TWV comment: to be indicated as QL, VG and to add (*)* TWA: agreed and also agreed to delete example variety "J red" (state 2)

Char. 10	*TWV comment: to read "Only varieties with leaf lobes absent: Leaf blade: shape" and to have states as cordate (1); triangular (2); reniform (3); circular (4)* TWA: agreed and also agreed to delete example variety "Kyushu 70" (state 2)
Char. 13	to add "(excluding anthocyanin coloration)" and to move before Char. 12
Char. 14	*TWV comment: state 1 to read "absent or very small" and to add state "small" (3) and to check example varieties* TWA: agreed and also agreed to delete the example varieties for state 1 and to have example varieties "Koukei 14, Yulmi" for state 3
Char. 15	*TWV comment: to be indicated as QN, VG; to add notes (a) and (d); and state 1 to read "very weak"* TWA: agreed
Char. 16	*TWV comment: to be indicated as VG* TWA: agreed
Char. 18	*TWV comment: to be deleted* TWA: agreed
Char. 20	*TWV comment: to be indicated as VG, to read "Plant: presence of flowers", to amend state 1 to read "absent" and state 9 to read "present" and to check example varieties* TWA: characteristic to be deleted
Char. 21	*TWV comment: state 3 to read "small (moderately compressed)" and state 7 to read "large (moderately elongated)"* TWA: agreed
Char. 22	*TWV comment: to read "Storage root: shape" with the states: ovate (1); elliptic (2); obovate (3); oblong (4); irregular (5)* TWA: agreed and also agreed to move before Char. 21
Char. 23	*TWV comment: to be deleted* TWA: agreed
Char. 25	example varieties to be amended to the following: state 3: Impilo state 7: Koukei 14, Shinhwangmi state 10: Ayamurasaki, Zami state 11: Happymi
Char. 26	*TWV comment: to be indicated as PQ* TWA: agreed

Char. 27	*TWV comment: to add example varieties from Char. 29* TWA: agreed and agreed to example varieties to be amended to the following: state 1: Hayanmi, Shirosengan state 2: Nakamurasaki, Koukei 14 state 4: Benihayato, Hayatoimo, Juhwangmi
Char. 28	*TWV comment: to have notes 1, 2, 3 and to add example varieties from Char. 27 in appropriate states* TWA: agreed
Char. 29	*TWV comment: to be indicated as VG* TWA: agreed and also agreed to move example variety “Hayatoimo” from state 5 to state 3
Char. 30	*TWV comment: to have notes 1, 2, 3* TWA: agreed
8.1 (c)	Stem internodes and diameter should be observed on an internode…”
Ad. 11	*TWV comment: to correct notes and to add illustration for state 9 for three-lobed variety* TWA: agreed
Ad. 22	*TWV comment: to be presented as below:* TWA: agreed

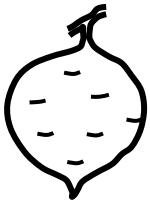
Ad. 22

position of broadest part

below middle

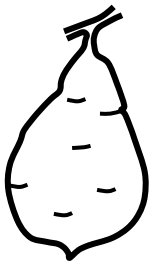
1
ovate

at middle



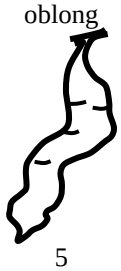
2
circular

above middle



3
obovate

4
oblong



5
irregular

Ad. 26	*TWV comment: to read "The secondary color is the color with the second largest surface area of skin."* TWA: agreed
Ad. 27	*TWV comment: to read "The main color is the color with the largest surface area of storage root in cross section"* TWA: agreed
Ad. 29	*TWV comment: to read "The secondary color is the color with the second largest surface area of storage root in cross section"* TWA: agreed
TQ 5.2, 5.4, 5.5, 5.7, 5.8	*TWV comment: to be deleted* TWA: agreed
TQ 7.3	*TWV comment: to read "Other information: Main use: Food / Feed [ ] Ornamental [ ]"* TWA: agreed

Urochloa (Brachiaria)

74. The subgroup discussed document TG/UROCH(proj.3), presented by Mr. Fabrício Santana Santos (Brazil), and agreed the following:

Cover page	To have BRACHIARIA as main common name and genus *Brachiaria* as main botanical name.
General	BR-MX and ZA will exchange seed to harmonize example varieties
1	To add the following text: "For examination purposes the five species are divided into the following two groups: Group 1: *Urochloa brizantha* (Hochst. ex A. Rich.) Stapf., *Urochloa decumbens* Stapf., and *Urochloa ruziziensis* R. Germ. & Evrard and their hybrids Group 2: *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp P. and *Urochloa humidicola* (Rendle) Morrone & Zuloaga and their hybrids."
2.3	Spelling of "germination" to be corrected
3.3.2	To move "C" to 3.4
3.5.1 and 3.5.2	To add "and any other observations made on all plants in the test"
4.2.2	To be deleted
4.2.3	To have a sample size of 60 plants. The rest remain unchanged
7. Table of characteristics	
General	To divide example varieties in Group 1 and Group 2
Char. 2	To delete: MS and to have notes 1-2-3
Char. 3	To check whether MS is correct
Char. 4	To add the following text: "Group 1 only"
New	Rhizome – absent (1), present (2) (group 2 varieties)
Char. 5	To delete note (a) and to add the following text: "Group 1 only"
Char. 6	To delete: note (e) and to add the following text: "Group 1 only"
Char. 7	To delete: note (e) and to provide a photograph in Add. 7
Char. 8	To delete: note (e)
Char. 9 and 10	To add the following text: "Group 1 only"
Char. 11	To have notes 1-2-3 and BR and MX to elaborate new illustration
Char. 12	To delete states "sparse" (3) and "very dense"(9), to have the following states "absent or sparse"(1), "medium"(2) and "dense" (3)
Char. 17	To check correlation with characteristic 12. If retained to be indicated as QN, to be moved after characteristic 19 and to add the following text: "Group 1 only"

Char. 18	To be divided into two characteristics as follows
New 18	To read: “Leaf blade: hairs”, with states of expression “on upper side only” (1); “on lower side only” (2) and “on both sides”(3). To add the following text: “Group 1 only”
New 18 bis	To read: “Leaf blade: distribution of hairs”, with states of expression “on base” (1); “on apex only” (2) and “on margins only” (3).
Char. 19	Spelling of “peduncle”, to add VG and explanation in section 8
Char. 20, 21 and 22	To add explanation
Chars. 21, 22	Group 1 only
Char. 23	State 3 to read “ medium purple” and to improve explanation
Char. 24	To improve explanation and to add illustration
Char. 25	To be indicated as QN, to ass “Group 1 only” and to add an explanation in section 8
Char. 26	To be indicated as MG/MS and QN
Char. 27	To be deleted
8. Explanation to the table of characteristics	
8.1	To move the explanation of “cespitosae” to the end of 8.1
8.1 b)	To improve the explanation, clarifying that the third leave from the top should be observed
Ad. 2	BR to provide new drawings
10. Technical Questionnaire	
6	To provide example

Variety description databases

75. The TWA considered document TWA/38/6 and noted the decision of the TC to replace the agenda item "Publication of variety descriptions" with an item for "Variety description databases" on the agendas of the sessions of the TC, TWPs and the BMT.

Combinations of lines or varieties

76. The TWA noted the report provided in document TWA/38/7.

77. An expert from the Republic of Korea reported on a case in the Republic of Korea concerning a combination of 3 near-isogenic rice lines that differed only with respect to disease resistance (see also documents TWA/37/7, paragraph 6 and TWA/36/8, paragraphs 13 and 14). It was explained that 2 of the lines had been protected, but that the third line was not distinct. The TWA noted, however, that the third line would be covered by the protection of the line from which it was not distinct.

UPOV information databases

78. The TWA noted the report provided in document TWA/38/4.

Guidance for drafters of Test Guidelines (presentation by the Office of the Union)

79. The TWA received a presentation of the latest version of the "Practical guide for drafters (Leading Experts) of UPOV Test Guidelines", a copy of which is provided as Annex VIII to this report. The TWA agreed that the guide should be attached to the e-mail reminder sent to Leading Experts.

Recommendations on draft Test Guidelines

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

80. The TWA agreed that the following draft Test Guidelines should be sent to the TC for adoption at its forty-sixth session, to be held in Geneva in April 2010, on the basis of the following documents and the comments in this report:

Pearl Millet* (Pennisetum glaucum (L.) R. Br.)
Sweet potato* (Ipomoea batatas (L.) Lam.)

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

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

Buckwheat* (*Fagopyrum esculentum* Moench)
Cassava (*Manihot esculaenta* Crantz.)
Common Vetch* (*Vicia sativa* L.) (Revision)
Durum wheat (Revision) (*Triticum durum* Desf.)

Flax, Linseed* (Revision) (*Linum usitatissimum* L.)
Foxtail millet* (*Setaria italica* (L.) P. Beauv.)
Groundnut (Revision) (*Arachis L.*)
Hemp* (*Cannabis sativa* L.)
Rhodes grass (*Chloris gayana* Kunth)
Sesame* (*Sesamum indicum* L.)
Urochloa (Brachiaria)*

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

Date and Place of the Next Session

83. At the invitation of Croatia, the TWA agreed to hold its thirty-ninth session in Osijek, Croatia, from May 24 to 28, 2010.

Future Program

84. 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 (document to be prepared by the Office of the Union)
5. TGP documents
6. Variety denominations (document to be prepared by the Office of the Union)
7. Information and databases
   (a) UPOV information databases (document to be prepared by the Office of the Union)
   (b) Variety description databases (document to be prepared by the Office of the Union and documents invited)
   (c) Exchangeable software (documents to be prepared by the Office of the Union)
   (d) Electronic application systems (document to be prepared by the Office of the Union)
8. Uniformity assessment
   (a) Method for calculation of COYU (document to be prepared by the Office of the Union)
   (b) Assessing uniformity by off-types on the basis of more than one sample or sub-samples (document to be prepared by the Office of the Union)
9. Example varieties (document to be prepared by France)

10. Development of regional sets of example varieties for the Test Guidelines for Rice (document to be prepared by IRRI)
11. Proposals for Partial Revision/Corrections of Test Guidelines (if appropriate)
12. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
13. Discussion on draft Test Guidelines (Subgroups)
14. Recommendations on draft Test Guidelines
15. Date and place of the next session
16. Future program
17. Report on the session (if time permits)
18. Closing of the session

Visit

85. On the afternoon of September 3, the TWA visited the Variety Testing Division, Korea Seed & Variety Service (KSVS), where Mr. Jung-Nam Suh, DUS Expert, reported on DUS trials for rose and Mr. Cho Yong-Hyun, DUS Expert, explained about DUS testing for rice. The TWA later visited the National Agrobiodiversity Center, National Academy of Agricultural Science, Rural Development Administration, where Mr. Na Young-Wang, Research Scientist of the National Agrobiodiversity Center made a presentation on the activities of the center. Finally, the TWA visited the National Institute of Crop Science, Rural Development Administration, where it received an oral presentation from Mr. Ji-Ung Jeung, rice breeder of the Rice Research Division.

[Annexes follow]

ANNEX I

LIST OF PARTICIPANTS

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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH (CGIAR)

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Joël GUIARD,

IV. OFFICE OF UPOV

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[Annex II follows]

ANNEX II

Welcome Address made by
Mr. CHO Il-Hoo
Director of Plant Variety Protection Division, Korean Seed & Variety Service (KSVS),
Ministry of Food, Agriculture, Forestry&Fisheries (MIFAFF)

Good Morning!

Mr. Joel Guiard, taking the chairperson of this 38th session of TWA, on behalf of Mr. Dirk Theobald,
Mr. Button and Mr. Lavignolle from the UPOV office,
Participants from UPOV members,
and ladies and gentlemen!

Welcome to the 38th UPOV TWA meeting!

I am very happy that we can host this important meeting in Seoul and express our warm welcome to all of you.

Looking back, in 2002, the same year that we, the Republic of Korea, joined UPOV, the UPOV/ASIA Regional Technical Meeting was held in Seoul. It was the first international meeting that we hosted related to UPOV.

Since the meeting, five Technical Working Party meetings of UPOV, that is, TWV, TWO, BMT, TWF and TWC, have been held in the Republic of Korea. Now, finally, we are hosting this 38th TWA session also.

In this context, I would like to extend my sincere gratitude to all UPOV members and the UPOV secretariat for giving us such valuable opportunities.

Mr. Chairperson,
and honorable delegates from member countries,

During that time, as a member of UPOV, the Republic of Korea has been fully committed to protecting plant varieties through cooperation with UPOV members. And we will also continue to play our roles actively and to increase our cooperation with UPOV members.

In this regard, the symposium, The Impact of Plant Variety Protection, held last week here, was very meaningful for the future development of PVP system in each country.
Again, I would like to thank UPOV secretariat and my colleagues for organizing that symposium and all the speakers for giving your excellent presentations.

I know this session of TWA is very important and many issues, to be discussed and formalized, are waiting for you.

I believe through your active participation, deep discussion and great contribution, this meeting will be very successful with many fruitful results.

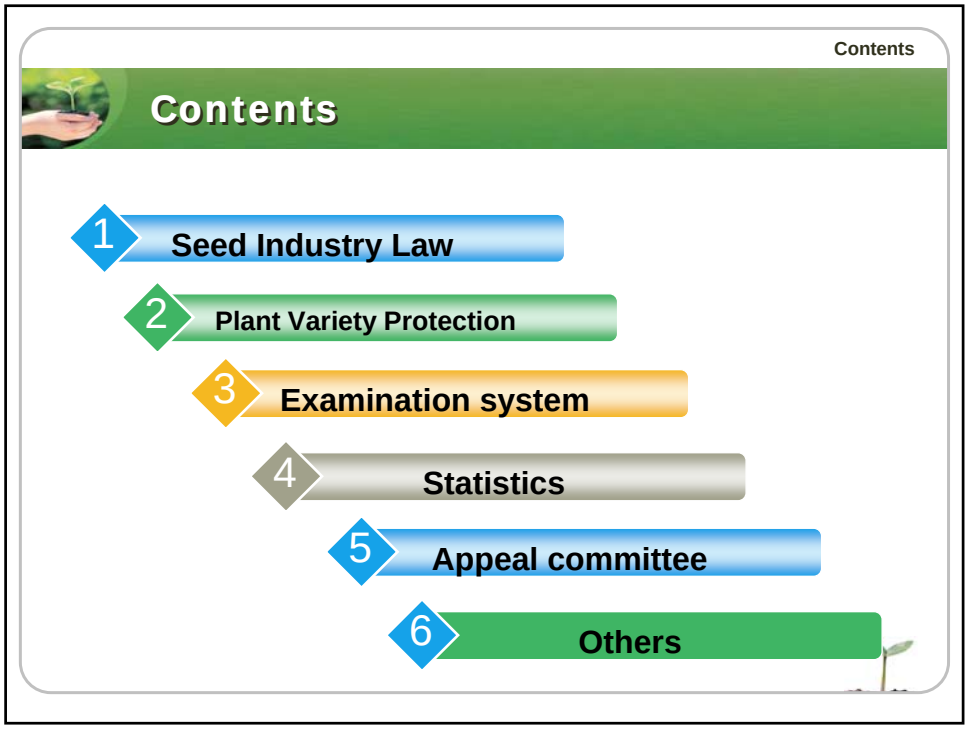
During your stay in Seoul, I hope all of you have a pleasant stay and enjoy various wonderful Korean cultures.

Thank you, and good luck!
Director of PVP Div. Mr. CHO Il-Hoo

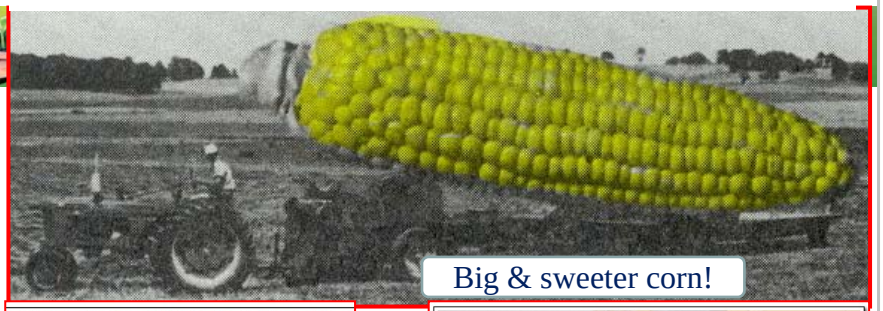
[Annex III follows]

ANNEX III

Presentation made by CHOI Keun-Jin, Senior Examiner, Variety Testing Division,
Korean Seed & Variety Service (ISVS), Ministry of Food, Agriculture, Forestry & Fisheries (MIFAFF)



What is the Korean breeder's dreams?



Big & sweeter corn!

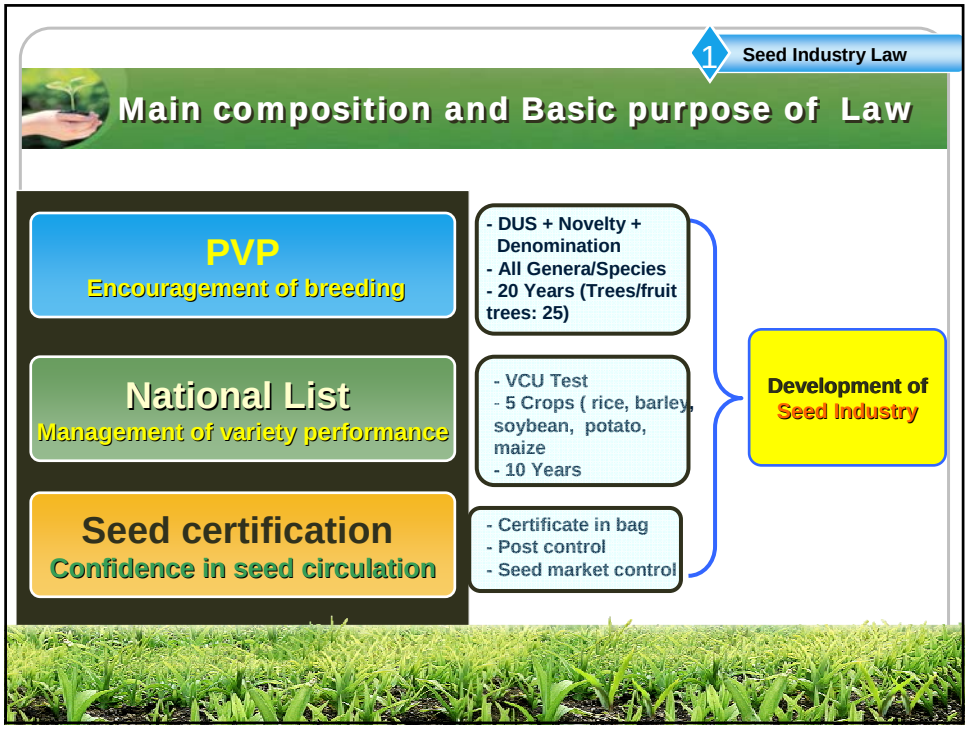
Big & sweeter watermelon!

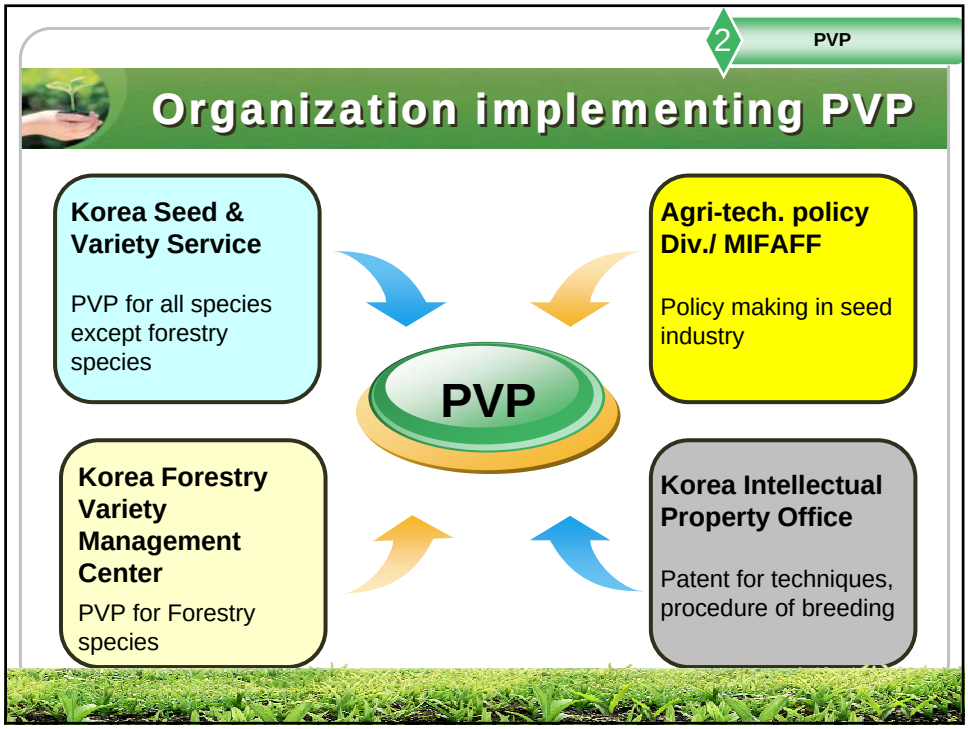
Big or long radish!

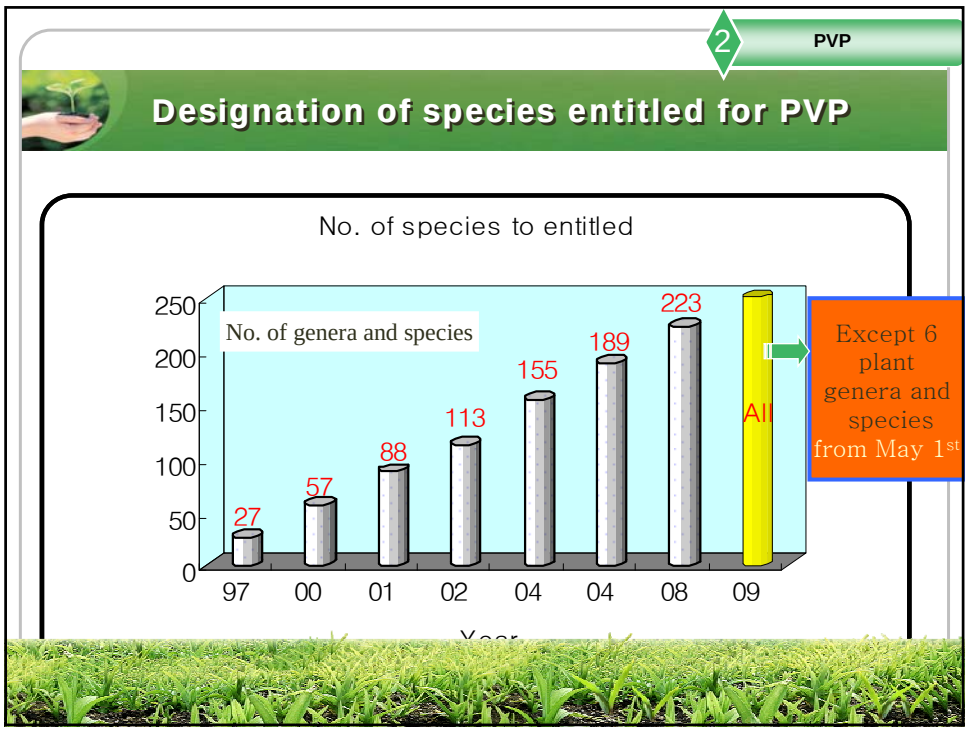
1 Seed Industry Law

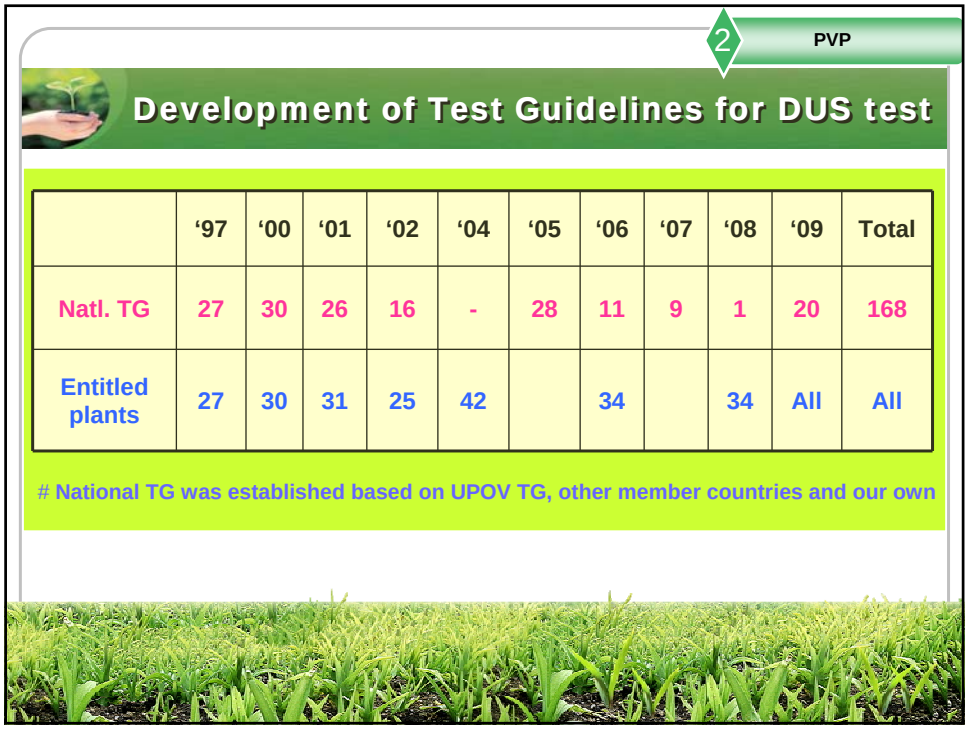
Preparation of the Seed Industry Law

1995. 2.	Drafting Seed Industry Law
1995.12.	Established and published for public
1997.12.	Implemented on December 31, 1997
Revision	- in 1999 (Law No. 5668), - 2000 (No. 6190) - 2001 (No. 6374) - 2003 (No. 6999) - 2005 (No. 7678) - 2007 (No. 8597)


1 Seed Industry Law
Main composition and Basic purpose of Law
PVP
Encouragement of breeding
- DUS + Novelty + Denomination
- All Genera/Species
- 20 Years (Trees/fruit trees: 25)
National List
Management of variety performance
- VCU Test
- 5 Crops (rice, barley, soybean, potato, maize
- 10 Years
Seed certification
Confidence in seed circulation
- Certificate in bag
- Post control
- Seed market control
Development of Seed Industry

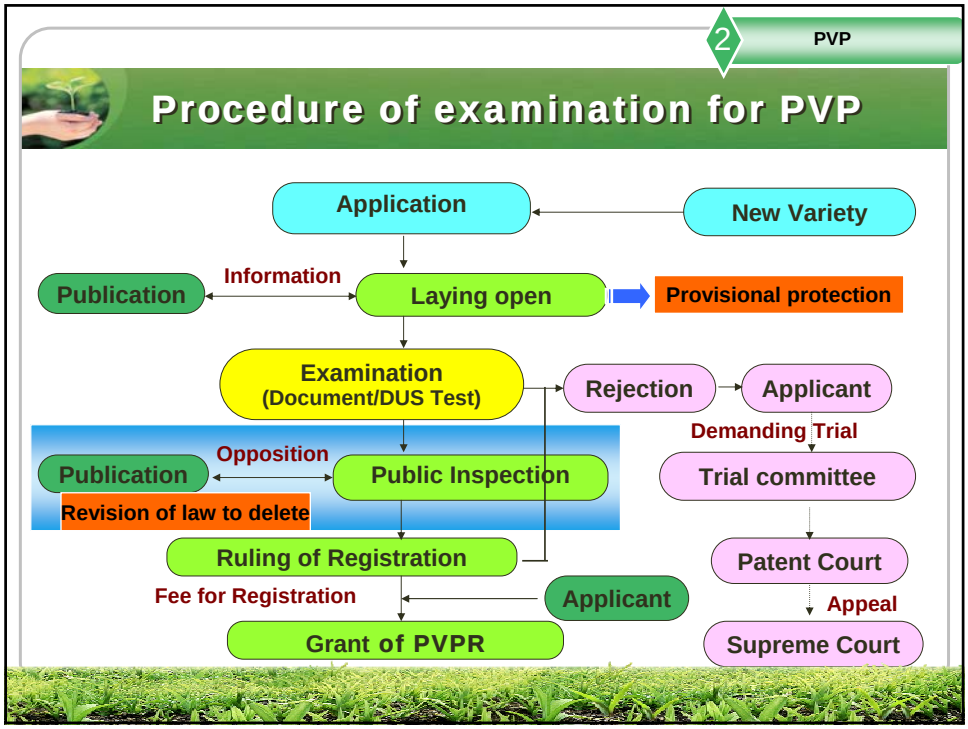

2 PVP
Organization implementing PVP
Korea Seed & Variety Service
PVP for all species except forestry species
Agri-tech. policy Div./ MIFAFF
Policy making in seed industry
PVP
Korea Forestry Variety Management Center
PVP for Forestry species
Korea Intellectual Property Office
Patent for techniques, procedure of breeding

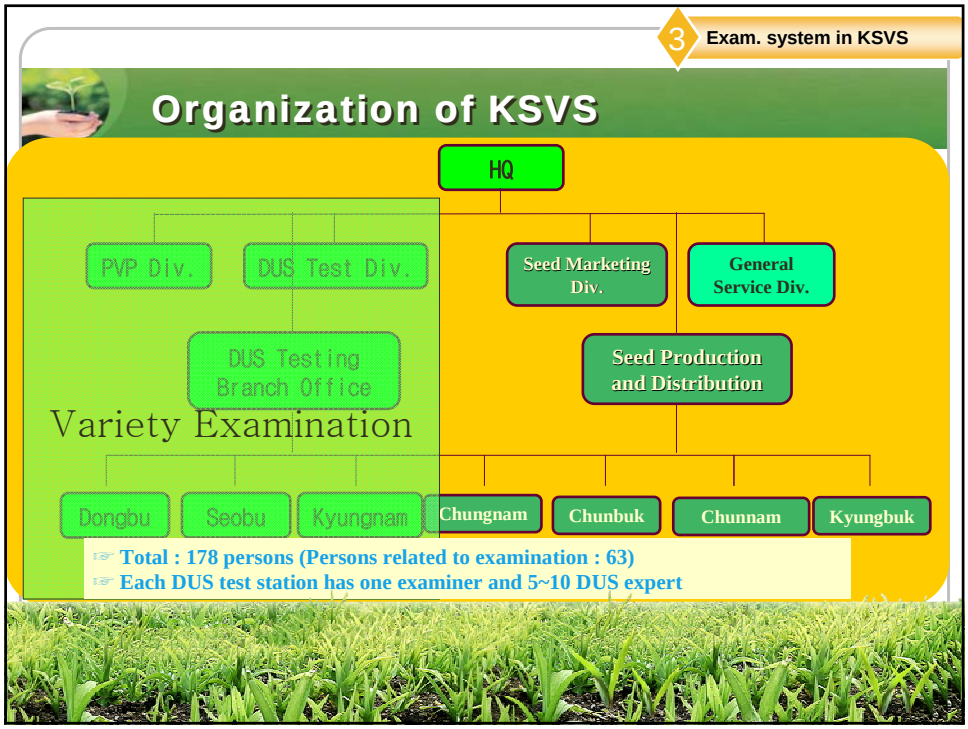


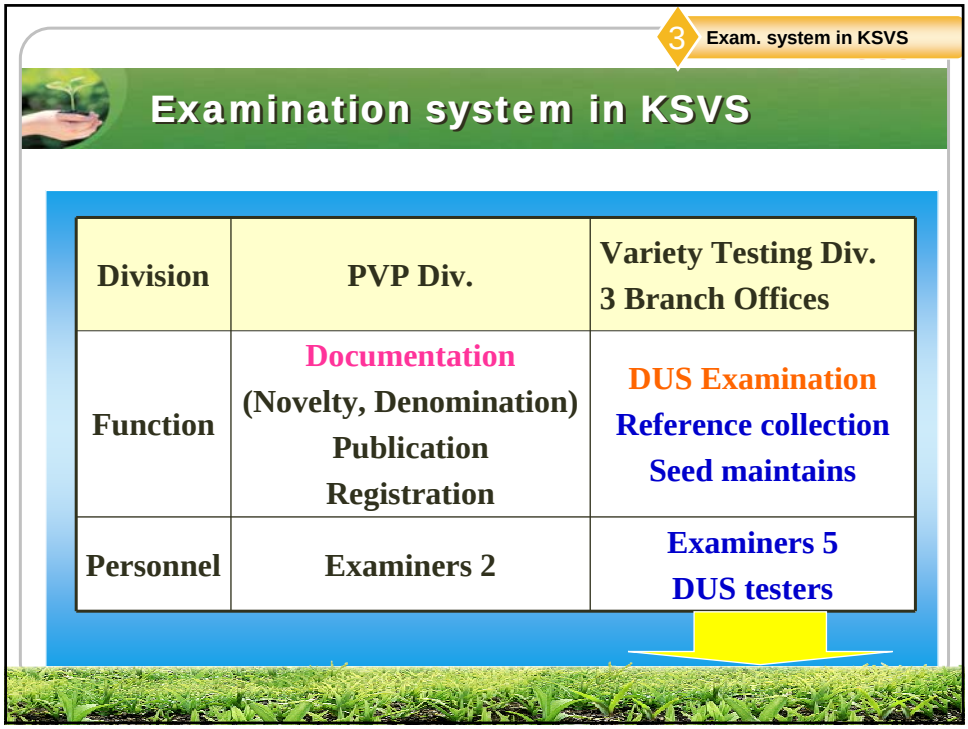


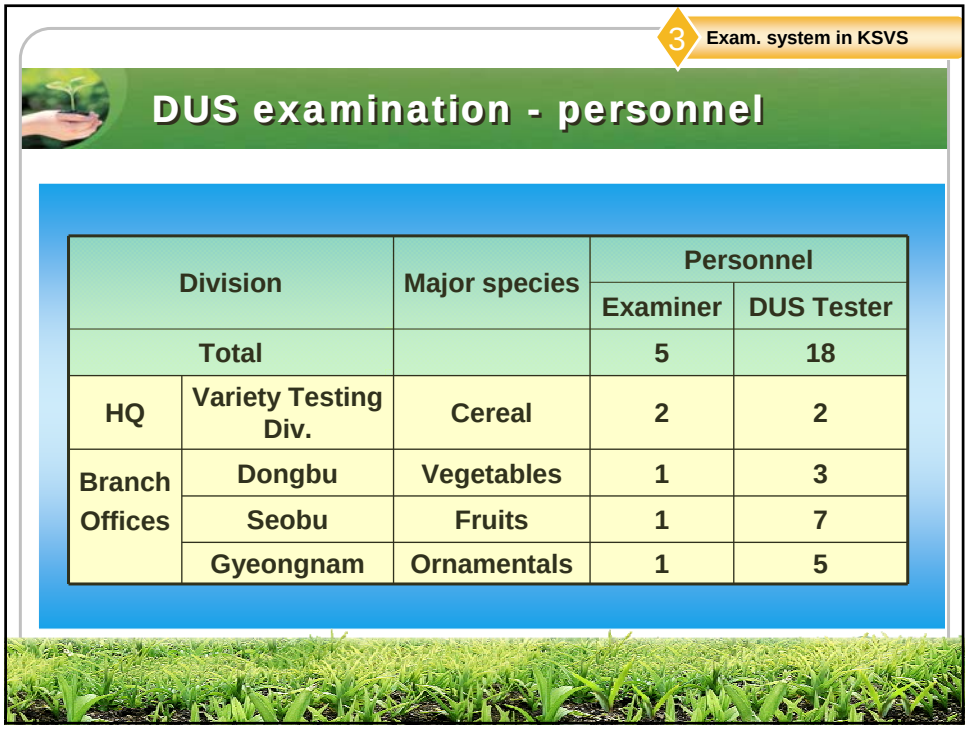
	'97	'00	'01	'02	'04	'05	'06	'07	'08	'09	Total
Natl. TG	27	30	26	16	-	28	11	9	1	20	168
Entitled plants	27	30	31	25	42		34		34	All	All

National TG was established based on UPOV TG, other member countries and our own


2
PVP
Procedure of examination for PVP
Application
New Variety
Publication
Information
Laying open
Provisional protection
Examination
(Document/DUS Test)
Rejection
Applicant
Demanding Trial
Opposition
Publication
Public Inspection
Trial committee
Revision of law to delete
Ruling of Registration
Patent Court
Fee for Registration
Applicant
Appeal
Grant of PVPR
Supreme Court


3
Exam. system in KSVS
Organization of KSVS
HQ
PVP Div.
DUS Test Div.
Seed Marketing Div.
General Service Div.
DUS Testing Branch Office
Seed Production and Distribution
Variety Examination
Dongbu
Seobu
Kyungnam
Chungnam
Chunbuk
Chunnam
Kyungbuk
☞ Total : 178 persons (Persons related to examination : 63)
☞ Each DUS test station has one examiner and 5~10 DUS expert





Division		Major species	Personnel	
			Examiner	DUS Tester
Total			5	18
HQ	Variety Testing Div.	Cereal	2	2
Branch Offices	Dongbu	Vegetables	1	3
	Seobu	Fruits	1	7
	Gyeongnam	Ornamentals	1	5

3 Exam. system in KSVS

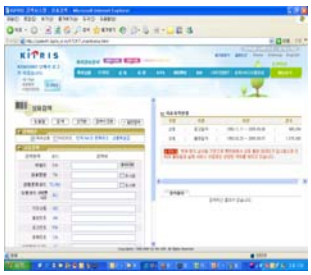
Examination of variety denomination

O Related article in Seed Industry Law
Article 109 “Requirement of variety denomination”
O 1 Denomination in 1 genera and species
O Trademark is not available as variety denomination

UPOV-ROM check

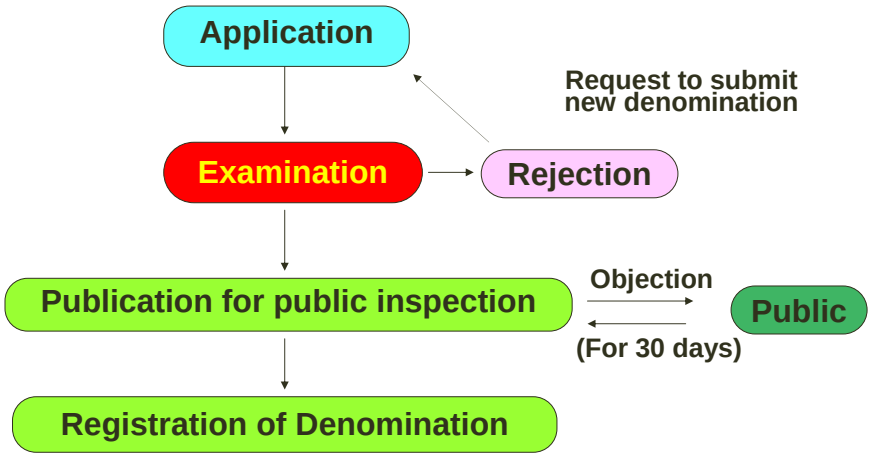
Computer program

Trademark check



3 Exam. system in KSVS

Procedure of examination for denomination



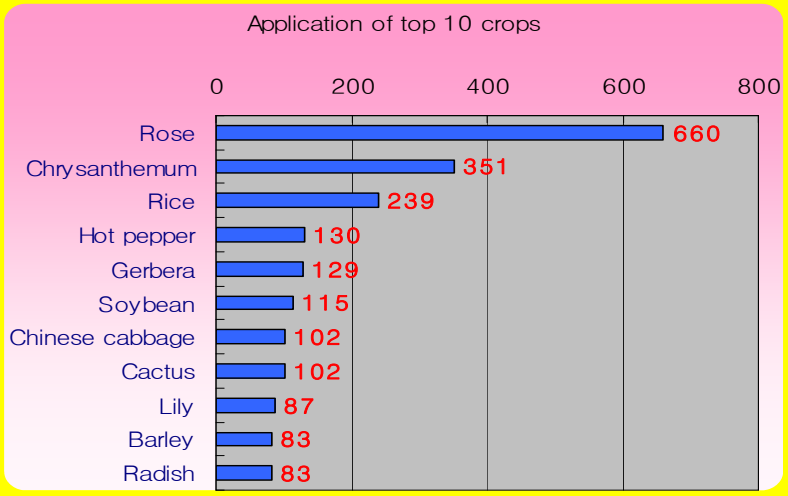
4 Statistics

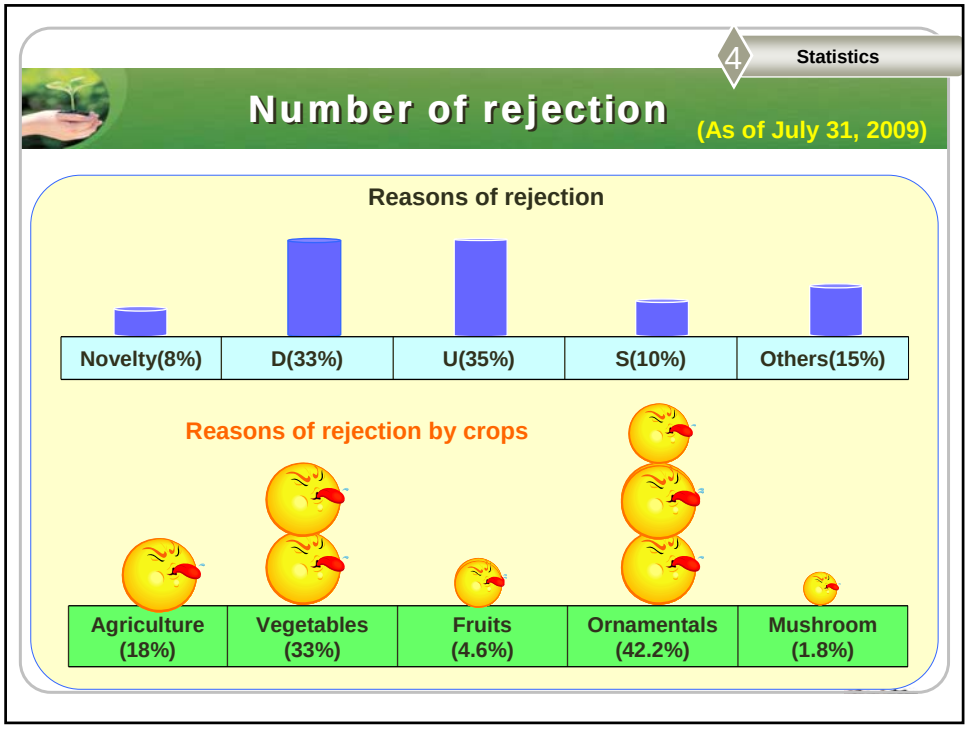
Number of applications, rejection and registration

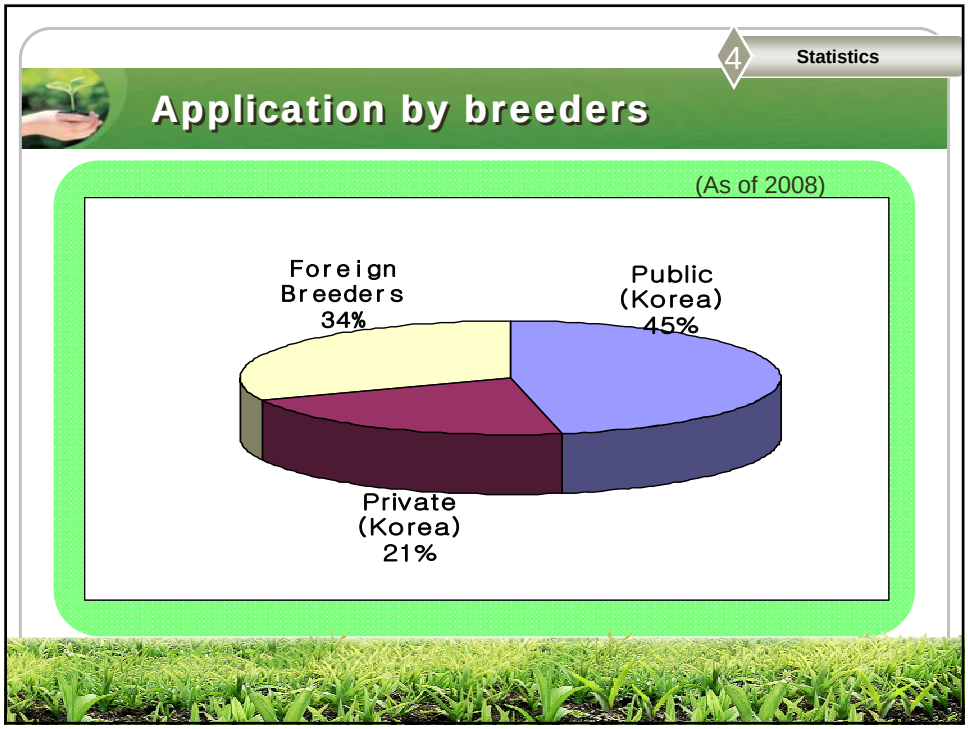
	Application	Rejection	Registration
Total	4,268	423	2,832
Food Crop	692	25	548
Vegetable	757	92	391
Fruits	214	18	128
Ornamentals	2,364	275	1,594
Grasses	20	2	16
Industrial	164	7	119
Mushroom	57	4	36

4 Statistics

Top 10 crops in application number




4
Statistics
Number of rejection
(As of July 31, 2009)
Reasons of rejection
Novelty(8%)
D(33%)
U(35%)
S(10%)
Others(15%)
Reasons of rejection by crops
Agriculture (18%)
Vegetables (33%)
Fruits (4.6%)
Ornamentals (42.2%)
Mushroom (1.8%)


4
Statistics
Application by breeders
(As of 2008)
Foreign Breeders 34%
Public (Korea) 45%
Private (Korea) 21%

3 Exam. system in KSVS

Fees for PVP

(Unit : KRW)

Application	38,000
Examination by documents	50,000
Examination by DUS trial	500,000/Growing

Annual Fee : increase every 5 years

Year after registration	1~5th	6~10th	11~15th	16~20th	21~25th
Annual fees (KRW)	30,000	75,000	225,000	500,000	1,000,000

5 Appeal case

Appeal committee

Members	8 members in MIFAFF
Roles	- Trial against rejection ruling - Invalidation trial of variety protection
Trial	o Collegial body - three trial members - decision making by a majority vote

Supreme Court

Appeal

Patent Court

Appeal

Appeal Committee

Appeal

Applicant	Objection to rejection ruling
Interested person, Examiner	Request of invalidation trial

5 Appeal case

Appeal : case 1(Distinctness)

Variety / Species	“K” variety / radish
PVP examination result	Rejection
Reason of rejection	Not distinct (by note)
Appeal committee	Another DUS test in other institute
Trial against rejection ruling	Distinct (by t-test)



5 Appeal case

Appeal : case 2(Uniformity)

Variety / Species	“SS” variety / Chinese cabbage X Cabbage
PVP examination result	Rejection
Reason of rejection	Not uniform
Trial against rejection ruling by appeal committee	- Judgement against for applicant - Applicant withdraw his appeal
Problem	Lack of uniformity guideline for interspecific variety



5 Appeal case

Appeal : case 3(EDV)

Variety / Species	"A" variety / Rose
PVP examination result	PVP Registration (Distinctness in 17 characteristics)
Appeal	Breeder of "S" variety
Reason of appeal	"A" is EDV of "S" ("A" is selected from natural mutation of "S")
Decision of appeal committee	Rejection of appeal (EDV matter is not scope of responsibillty of committee)

5 Appeal case

Appeal : case 4 (Uniformity)

- Chinese cabbage X Turnip<*Brassica campestris X Brassica rapa*>
- **Examination : Ruling of rejection fresh vegetable.**
- **Applicant submit application to the Trial Committee**
- **Appeal Committee : had a meeting two times to examine the appeal**

Radish type(Ⅰ)	Radish type(Ⅱ)	Intermediate type(Ⅲ)	Chinese cabbage type(Ⅳ)	Chinese cabbage type(Ⅴ)	Total
17	12	15	8	8	60

5 Appeal case

Appeal : case 5 (Novelty)

- Apple variety registered in 2005
- Third party applied to nullification of variety
  - exploited commercially 2002 before application
- Appeal Committee make a juridical sentence by nullification of variety right
  - Applicant appeal to patent court, but failed



6 Others

Arbitration Committee / Seed Council

Members of Seed council	10-15 members in MIFAFF
Roles	- Advice to development of seed industry, PVP, NL - Examination of arbitration decision on grant of non-exclusive license - Arbitration of dispute of infringement between PBR holders
Arbitration committee	- Three members - Arbitration within 1 year after arbitration application

6 Others

International cooperation

Host of UPOV TWP session

Year	TWP	Venue
2004	38 th TWV	Seoul
2005	38 th TWO	Seoul
2006	10 th BMT	Seoul
2007	38 th TWF	Jeju
2008	26 th TWC	Jeju
2009	38 th TWA	Seoul

6 Others

International cooperation

❑ PVP Training program

O Contents

- PVP of Korea (Law, DUS)
- PVP under UPOV system

O Financial support : KOICA

(Korea International Cooperation Agency)

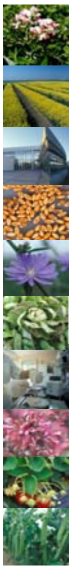
Year	No. of countries	No. of trainees
2007	12	12
2008	13	17
2009	10	14

[Annex IV follows]

ANNEX IV

Presentation made by experts from France

UPOV WORKING GROUP ON AGRICULTURAL CROPS
SEOUL September 2009



Information on GEVES

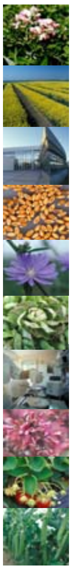
Moving from Versailles to Anjou of the headquarters and the technical unit La Minière

New address: GEVES, rue georges Morel, BP 90024, 49610 Beaucouzé

New buildings still under construction, administrative and technical activites are operational

1

UPOV WORKING GROUP ON AGRICULTURAL CROPS
SEOUL September 2009



BUREAU VERITAS
Certification

Certification

GEVES

NF EN ISO 9001 : 2008

STUDY AND CONTROL OF NEW PLANT VARIETIES IN THE FRAMEWORK OF NATIONAL AND EU CATALOGUES AND PLANT BREEDER'S RIGHTS.
ANALYSIS OF SEEDS AND SEEDLINGS FOR SEED LOTS CERTIFICATION AND INTERNATIONAL TRADE.
MONITORING OF LABORATORIES NETWORKS.
BIOCHEMICAL AND MOLECULAR ANALYSIS ON VARIETIES AND SEEDS.

2

[Annex V follows]

ANNEX V

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

UPOV

RECENT DEVELOPMENTS IN UPOV

UPOV

OVERVIEW

- UPOV Membership
- Council
- Consultative Committee
- CAJ (information materials)
- Symposium on Contracts
- Second World Seed Conference
- Bioversity (GIGA project)
- TC / Test Guidelines

MEMBERSHIP OF UPOV

67 Members
(66 States and the European Community)

New Members:

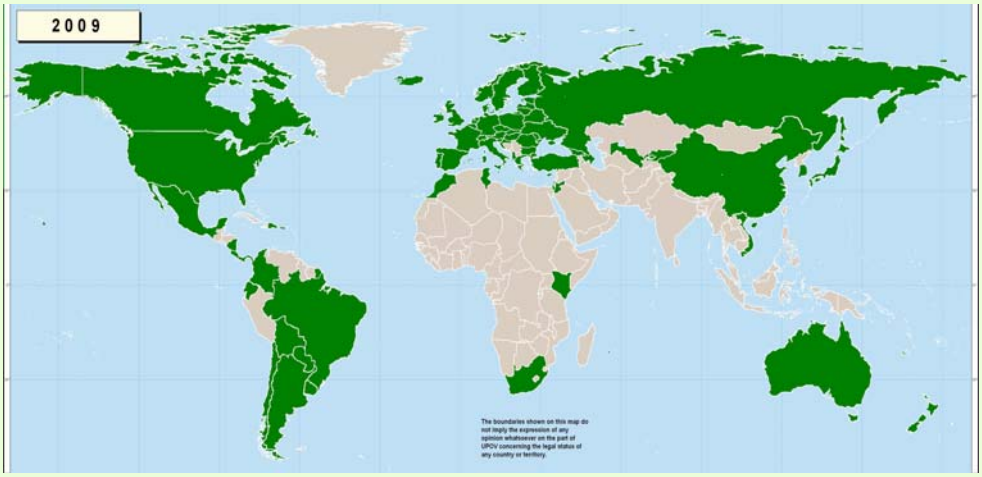
Georgia	November 29, 2008
Costa Rica	January 12, 2009

Draft Laws examined	Council Session	Advice
FYR Macedonia	October 30, 2008	positive
Bosnia and Herzegovina	October 30, 2008	amendments of draft law required - to be resubmitted to Council
Peru	April 3, 2009	positive

India, Zimbabwe

Opinion on whether India and Zimbabwe have acted expeditiously to complete their legislation and any UPOV formalities and to effect the deposit, to be the responsibility of the Consultative Committee

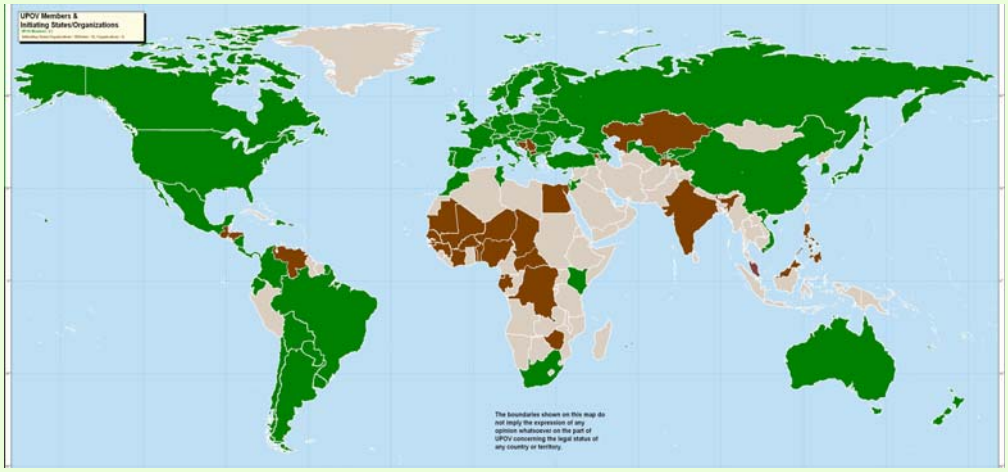
UPOV Membership / Territories covered
67 members



UPOV

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

Initiated the Procedure
16 States
1 intergovernmental organization



UPOV

COUNCIL

COUNCIL

Mr. Francis Gurry appointed as the new **Secretary-General of UPOV** for the period from October 30, 2008 to September 30, 2014.

Appointment of **Vice Secretary-General**, **Mr. Rolf Jördens** extended until November 30, 2010.

NEW SECRETARY-GENERAL OF UPOV

Mr. Francis Gurry (Australia)

COUNCIL

The Council elected:

- **Mr. Jöel Guiard** (France),
  Vice-Chairman of the **Technical Committee (2008-2010)**.

and

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

for the period October 2008- October 2011

COUNCIL

Statistics

In 2007, the total annual
number of titles issued by UPOV members
exceeded **10,000** for the first time.

UPOV

COUNCIL

Convention on Biological Diversity (CBD)

Peer review of the draft "Study on the relationship between the ABS International Regimen and other international instruments which govern the use of genetic resources: The WTO; WIPO; and UPOV".

see http://www.upov.int/en/about/key_issues.htm

UPOV

CONSULTATIVE COMMITTEE

UPOV

Consultative Committee

Assistance webpage

- to provide **information on relevant forms of assistance** in the development of plant variety protection according to the UPOV Convention and an approach to seek **to enhance extra-budgetary sources of funding** for assistance
- **Mr. Minwook Kim**, Deputy Director, Foodgrain Policy Division, Ministry for Food, Agriculture and Fisheries, Republic of Korea
  (internship: November 3, 2008 to November 2, 2010)
  to investigate extra-budgetary resources and to assist in the development of proposals to access such funding.

UPOV

Consultative Committee

- Financial Regulations and Rules of UPOV and
- External audit committee and internal audit provisions

  ⇒ *ad hoc* working group established

- Endorsed preparation of the draft program and budget of the Union for the 2010-2011 biennium
- Endorsed medium-term work program of the Office of the Union for the period 2012-2015
- Approved procedure for the appointment of a new Vice Secretary-General

UPOV

ADMINISTRATIVE AND LEGAL COMMITTEE (CAJ)

UPOV

CAJ

INFORMATION MATERIALS

⇒ ***Guidance for the preparation of laws based on the 1991 Act of the UPOV Convention (document UPOV/INF/6/1 Draft 2)***

PART I: *EXAMPLE TEXT FOR ARTICLES*

PART II: *NOTES BASED ON INFORMATION MATERIALS*

proposed for adoption by the Council
in October 2009

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

UPOV

CAJ

INFORMATION MATERIALS (CAJ/59/3: Annex)

Latest reference	Explanatory Notes on:	Status
UPOV/EXN/NOV	Novelty under the UPOV Convention	Approved by CAJ
Draft addition	Article 6(2) of the 1991 Act "Varieties of recent creation": example provision	CAJ by correspondence (May 2009)
UPOV/EXN/PRI	Right of Priority under the UPOV Convention	Approved by CAJ
UPOV/EXN/PRP	Provisional Protection under the UPOV Convention	Approved by CAJ
Draft addition	Article 13 of the 1991 Act "Provisional Protection": example provision(s)	CAJ by correspondence (May 2009)
UPOV/EXN/EDV	Essentially Derived Varieties under the UPOV Convention	Approved by CAJ CAJ-AG (October 2009) to consider a possible revision
UPOV/EXN/EXC	Exceptions to the Breeder's Right under the UPOV Convention	Approved by CAJ
UPOV/EXN/NUL	Nullity of the Breeder's Right under the UPOV Convention	Approved by CAJ
UPOV/EXN/CAN	Cancellation of the Breeder's Right under the UPOV Convention	Approved by CAJ
UPOV/EXN/ENF Draft 2	Enforcement of Breeders' Rights under the UPOV Convention	To be considered by CAJ/59 (April 2009)
UPOV/EXN/GEN Draft 1	Genera and Species to be Protected under the 1991 Act of the UPOV Convention	CAJ by correspondence (May 2009)
UPOV/EXN/NAT Draft1	National Treatment under the 1991 Act of the UPOV Convention	CAJ by correspondence (May 2009)
UPOV/EXN/HRV Draft 2	Acts in Respect of Harvested Material under the UPOV Convention	Draft 3 CAJ correspondence (May 2009)and Draft 4 to be considered by CAJ-AG (October 2009)
UPOV/EXN/RES Draft1	Restrictions on the Exercise of the Breeder's Right under the UPOV Convention	CAJ by correspondence (May 2009)
UPOV/EXN/BRD Draft 1	Definition of Breeder under the 1991 Act of the UPOV Convention	Draft 2 to be considered by CAJ-AG (October 2009)
UPOV/EXN/VAR Draft 1	Definition of Variety under the 1991 Act of the UPOV Convention	Draft 2 to be considered by CAJ-AG (October 2009)
UPOV/EXN/... Draft 1	Conditions and Limitations Concerning the Breeder's Authorization	To be considered by CAJ-AG (October 2009)
UPOV/EXN/COND Draft 1	Conditions of Protection under the UPOV Convention	CAJ-AG (October 2007) agreed not to pursue the development of a document
Latest reference	**INF documents**	**Status**
UPOV/INF/12/1	Explanatory Notes on Variety Denominations under the UPOV Convention	Adopted by the Council
UPOV/INF/6/1 Draft 2	Guidance for the preparation of laws based on the 1991 Act of the UPOV Convention	To be considered by CAJ/59 (April 2009)
UPOV/INF/... Draft 1	Guidance on how to become a member of UPOV and accede to the 1991 Act of the UPOV Convention	CAJ by correspondence (May 2009)
UPOV/INF/... Draft 1	Guidance on how to ratify, or accede to, the 1991 Act of the UPOV Convention (for members of UPOV only)	CAJ by correspondence (May 2009)

UPOV

GENERAL

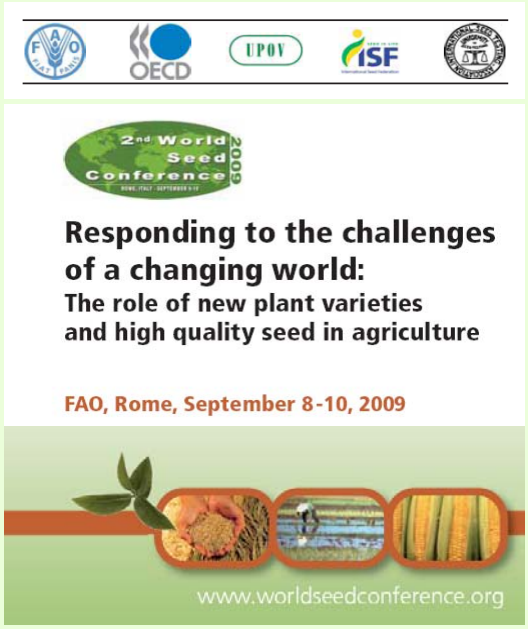
Symposium on Contracts in relation to Plant Breeders' Rights

- Purpose: provide information to authorities and breeders on practices and experiences under different jurisdictions

(October 31, 2008, UPOV headquarters, Geneva)

http://www.upov.int/en/news/2008/upov_symposium_contracts_2008

Second World Seed Conference



Second World Seed Conference

EXPERT FORUM

TUESDAY, SEPTEMBER 8, 2009

Session 3. Plant variety protection

Chairperson: Mr. Doug Waterhouse (Australia)), President of the Council of the International Union for the Protection of New Varieties of Plants (UPOV)

16.00 Benefits of plant variety protection
Mr. Rolf Jördens, Vice Secretary General, UPOV

16.25 Key requirements for an effective system of plant variety protection
Mr. Peter Button, Technical Director, UPOV

16.50 Experiences in Kenya
Mr. Evans Sikinyi, Head, Seed Certification and Plant Variety Protection, Kenya Plant Health Inspectorate Service (KEPHIS)

17.15 Experiences in the Republic of Korea
Mr. Chang Hyun Kim, Director General, Korea Seed & Variety Service (KSVS)

17.40 Discussion

17.55 Summary by Chairperson

POLICY FORUM

THURSDAY, SEPTEMBER 10, 2009

09.00 Welcome by Mr. Bernard Le Buanec, Chairman of the Organising Committee
09.30 Welcome by Mr. Jacques Diouf, Director-General of FAO (tbc)
10.00 Welcome address by the Minister of Agriculture, Italy (tbc)
10.30 Key Note Speech by Mr. M. S. Swaminathan, UNESCO Chair in Ecotechnology, Member of Parliament of India and Father of the Indian Green Revolution
11.00 Conclusions of the Expert Forum
11.30 Providing an Enabling Environment (Panel discussion)
Panel moderator
Mr. Bernard Le Buanec
Panel members
Mr. Ken Ash, Director, Trade and Agriculture directorate, OECD
Mr. Francis Gurry, Director General, World Intellectual Property Organization (WIPO) and Secretary General, UPOV (tbc)
Mr. John C. Kedera, Managing Director, KEPHIS
Mr. Michael Muschick, Secretary General, ISTA
Mr. Shivaji Pandey, Director of Plant Production and Protection Division (AGP), FAO
Ms. Esther Penunia, Secretary General, AFA-Asian Farmers' Association for Rural Development
Mr. Orlando de Porti, President, ISF
Mr. Doug Waterhouse (Australia), President of the Council, UPOV
Representative of the International Federation of Agricultural Producers (IFAP) (tbc)
Chairperson of Session 2 (tbc)

12.00 *Lunch*

13.30 Providing an Enabling Environment (continued)

15.00 *Coffee break*

15.30 Concluding remarks
16.00 Closing of the Conference

BIOVERSITY

GIGA (Germplasm Information on Germplasm Accessions) project to define a **minimum set of characterization and evaluation standards** for 22 crops of major economic importance

Crop specific experts invited from UPOV

- Bean
- Faba bean
- Cultivated potato
- Yam
- Rice
- Cowpea
- Chickpea
- Maize
- Pearl millet
- Pigeon pea
- Sorghum
- Sweet potato
- Finger millet
- Lentil

BIOVERSITY

Crop (Bioversity list)	Relevant UPOV Test Guidelines	TWP	Leading Expert
Bean	Phaseolus vulgaris L. (French bean) (TG/12/9)	TWV/ TWA	Closed
Faba bean (Vicia faba L.)	Vicia faba L. var. major Harz (Broad bean) (TG/206/1) / Vicia faba L. var. minor Harz (Field bean) (TG/8/6)	TWV/ TWA	Closed
Cultivated potato (Solanum tuberosum L.)	Solanum tuberosum L. (TG/23/6)	TWA	Closed
Yam (Dioscorea spp.)	Dioscorea alata L.; Dioscorea polystachya Turcz.; Dioscorea japonica Thunb. (TG/YAM (adopted 2009))	TWV	Closed

BIOVERSITY

Crop (Bioversity list)	Relevant UPOV Test Guidelines	TWP	Leading Expert
Maize (Zea mays L.)	Zea mays L. (TG/2/7)	TWA (/TWV)	Joël Guiard (FR)
Pearl millet (Pennisetum glaucum L.)	Pennisetum glaucum (L.) R. Br. (TG/PRL_MIL(proj.5))	TWA	Mr. Luís Gustavo Asp Pacheco (BR)
Rice (Oryza sativa L.)	Oryza sativa L. (TG/16/8)	TWA	Luis Salaices (Spain)
Sorghum (Sorghum bicolor (L.) Moench)	Sorghum bicolor L. (TG/122/3)	TWA	Joël Guiard (FR)
Sweet potato (Ipomoea batatas)	Ipomoea batatas (L.) Lam. (TG/SWEETPOT(proj.3))	TWA/TWV	Keun-Jin Choi (KR)

UPOV

BIOVERSITY

Crop (Bioversity list)	Relevant UPOV Test Guidelines	TWP	Leading Expert
Cowpea (Vigna unguiculata L.)	Vigna unguiculata (L.) Walp. subsp. sesquipedalis (L.) Verdc.) (TG/COWPEA (adopted 2009))	TWV	Mitsuo Yuasa (JP)
Chickpea (Cicer arietinum L.)	Cicer arietinum L. (TG/143/4)	TWV	Francois Boulineau (FR)
Lentil (Lens culinaris Medik)	Lens culinaris Medik. (TG/210/1)	TWV	Francois Boulineau (FR)
Finger millet (Eleusine coracana (L.) Gaertn)	-		No UPOV expert
Pigeon pea (Cajanus cajan (L.) Millsp.)	-		No UPOV expert

UPOV

Developments at the 45th session
(March 2009)

of the

TECHNICAL COMMITTEE

(not on the TWP agenda)

Test Guidelines adopted by Technical Committee in 2009

New Test Guidelines:

Status	Document No.	English	Drafter	TWP
Posted	TG/COWPEA(proj.4)	Asparagus-bean	JP/NL	TWV
Posted	TG/HEVEA(proj.6)	Rubber	BR	TWO
Posted	TG/NERIUM(proj.5)	Oleander	FR	TWO
Posted	TG/PASSI(proj.6)	Passion Fruit	ZA	TWF
Asterisked chars. to be agreed by TWO	TG/PHLOX(proj.3)	Phlox	NL	TWO
Posted	TG/PRUNU_PAD(proj.4)	Bird cherry	HU	TWO/ TWF
Posted	TG/TARO(proj.4)	Taro	JP	TWV
Posted	TG/YAM(proj.4)	Yam	JP	TWV

Test Guidelines adopted by Technical Committee in 2009

Status	Document No.	English	Drafter	TWP
Revisions:				
Being checked	TG/2/7	Maize	FR/HU	TWA/ TWV
UA comments to be resolved	TG/7/10	Pea	GB	TWV/ TWA
Posted	TG/28/9	Zonal Pelargonium	DE	TWO
Being checked	TG/45/7	Cauliflower	FR	TWV
Partial revisions				
Posted	TG/89/6 Rev.	Swede		TWV
Posted	TG/155/4 Rev.	Pumpkin		TWV
Posted	TG/209/1 Rev.	Dendrobium		TWO
Posted	TG/220/1 Rev.	Verbena, Vervain		TWO

Other Test Guidelines considered by Technical Committee in 2009

Status	Document No.	English	Drafter	TWP
Referred back to TWO	TG/ANUBI(proj.5)	Anubias	SG	TWO
Referred back to TWF	TG/FIG(proj.4)	Fig	ES	TWF
Referred back to TWO	TG/MOKARA(proj.5)	Mokara	SG	TWO

Test Guidelines corrections notified to Technical Committee in 2009

Status	Document No.	English	TWP
Published	TG/26/5 Corr.	Chrysanthemum	TWO
Published	TG/86/5 Corr.	Anthurium	TWO
Published	TG/94/6 Corr.	Ling, Scots Heather	TWO
Published	TG/176/4 Corr.	Osteospermum	TWO
Published	TG/225/1 Corr.	Waxflower	TWO
Published	TG/238/1 Corr.	Tea	TWA
Published	TG/241/1 Corr.	Nemesia	TWO

Test Guidelines

- **257 Test Guidelines** adopted

- Further **64 to be discussed** in 2009
  - 39 new Test Guidelines
  - 22 Revisions
  - 3 Partial revisions
    (31 "final" draft stage)

TG Drafters' Webpage

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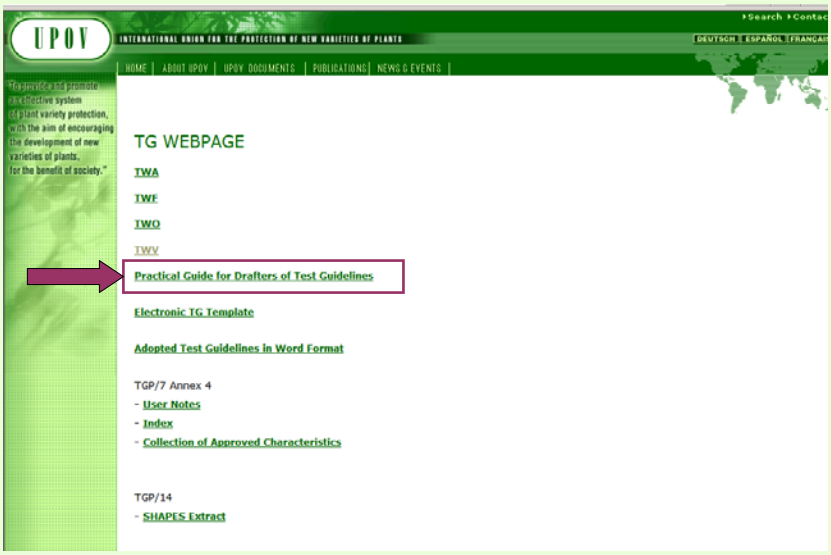

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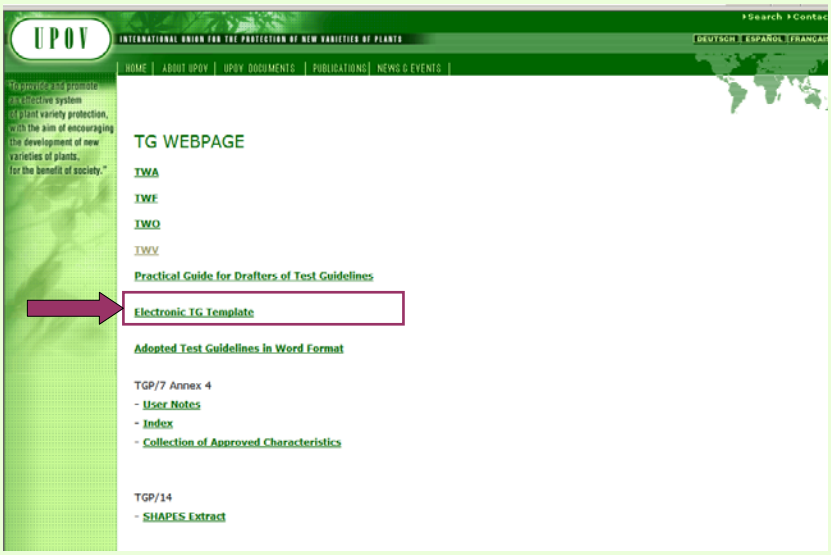

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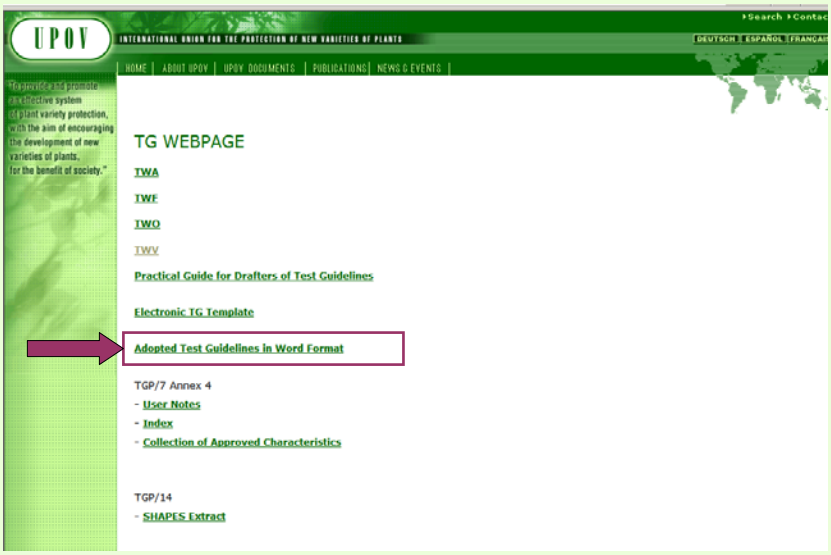

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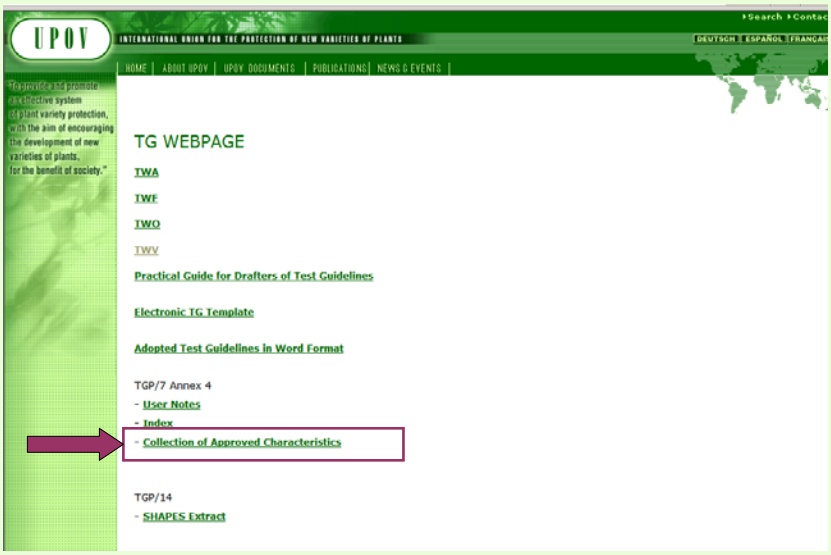

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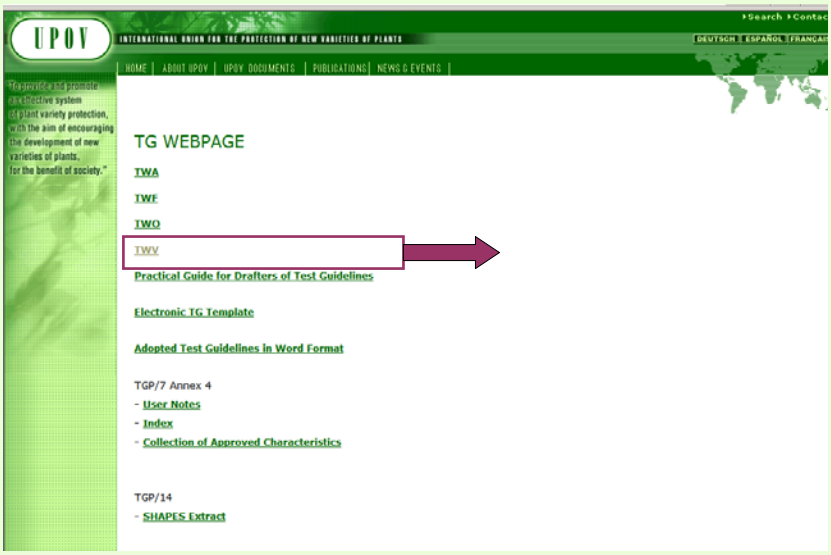

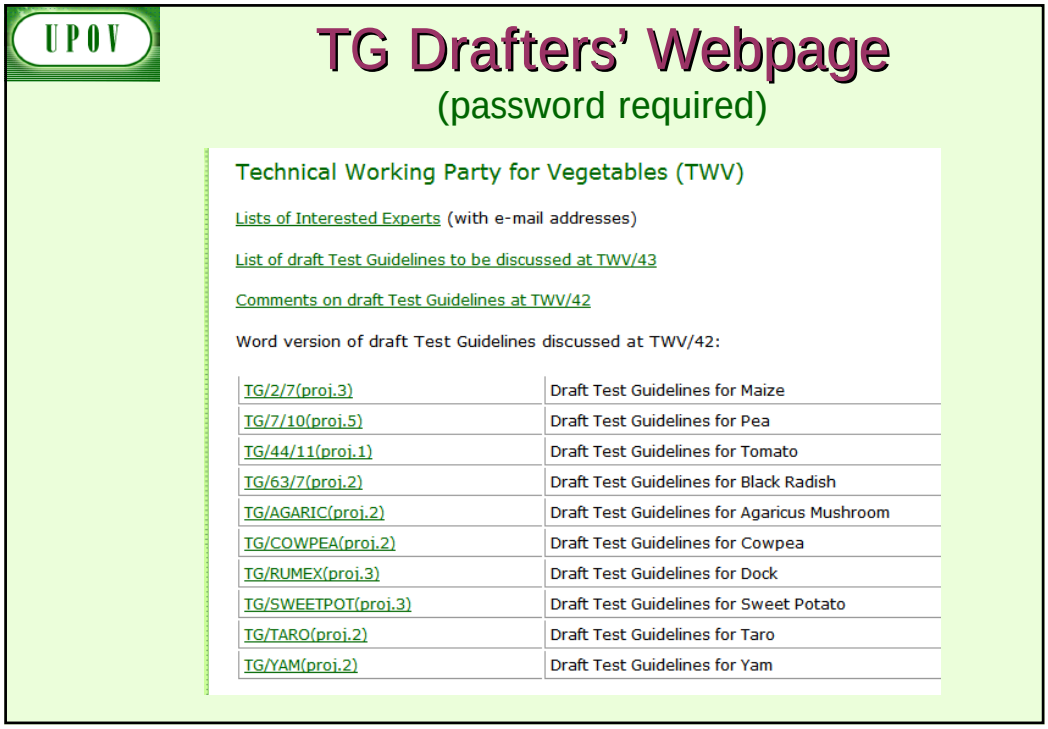
UPOV
TG Drafters' Webpage
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Technical Working Party for Vegetables (TWV)
Lists of Interested Experts (with e-mail addresses)
List of draft Test Guidelines to be discussed at TWV/43
Comments on draft Test Guidelines at TWV/42
Word version of draft Test Guidelines discussed at TWV/42:
TG/2/7(proj.3) Draft Test Guidelines for Maize
TG/7/10(proj.5) Draft Test Guidelines for Pea
TG/44/11(proj.1) Draft Test Guidelines for Tomato
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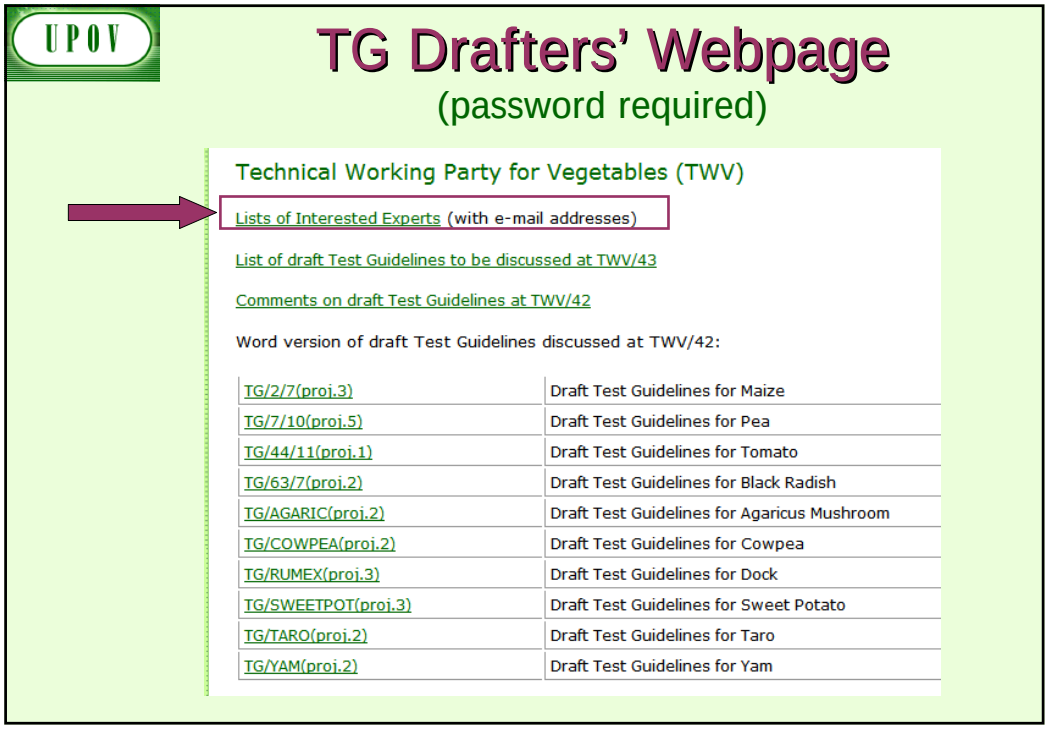
TG/AGARIC(proj.2) Draft Test Guidelines for Agaricus Mushroom
TG/COWPEA(proj.2) Draft Test Guidelines for Cowpea
TG/RUMEX(proj.3) Draft Test Guidelines for Dock
TG/SWEETPOT(proj.3) Draft Test Guidelines for Sweet Potato
TG/TARO(proj.2) Draft Test Guidelines for Taro
TG/YAM(proj.2) Draft Test Guidelines for Yam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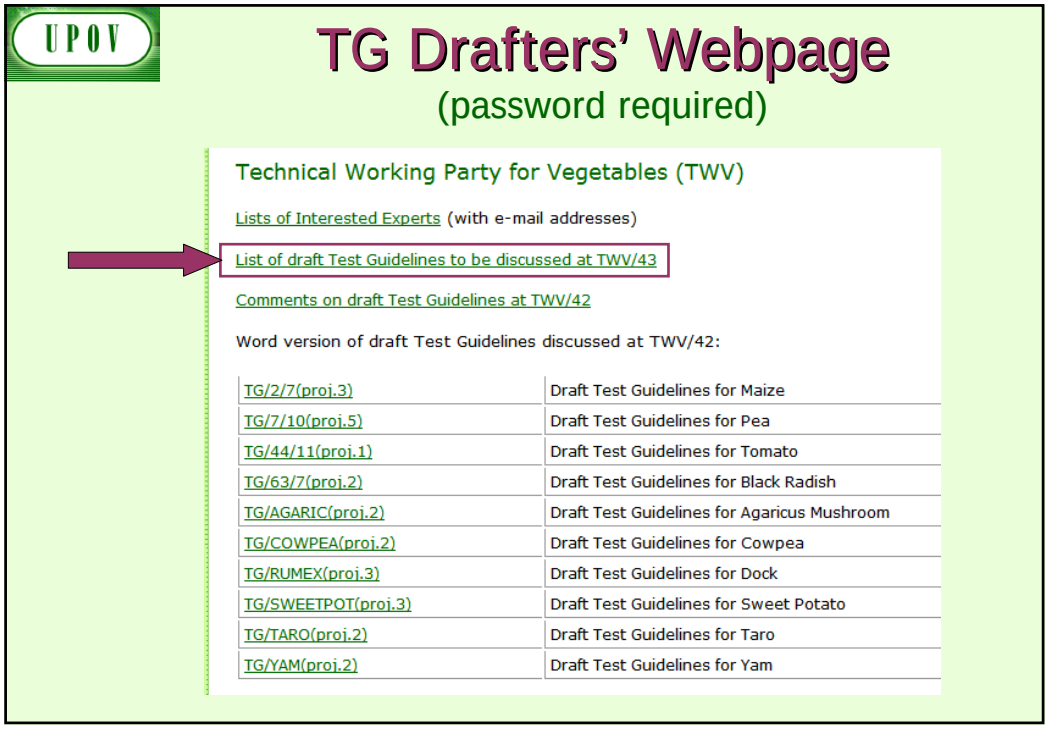
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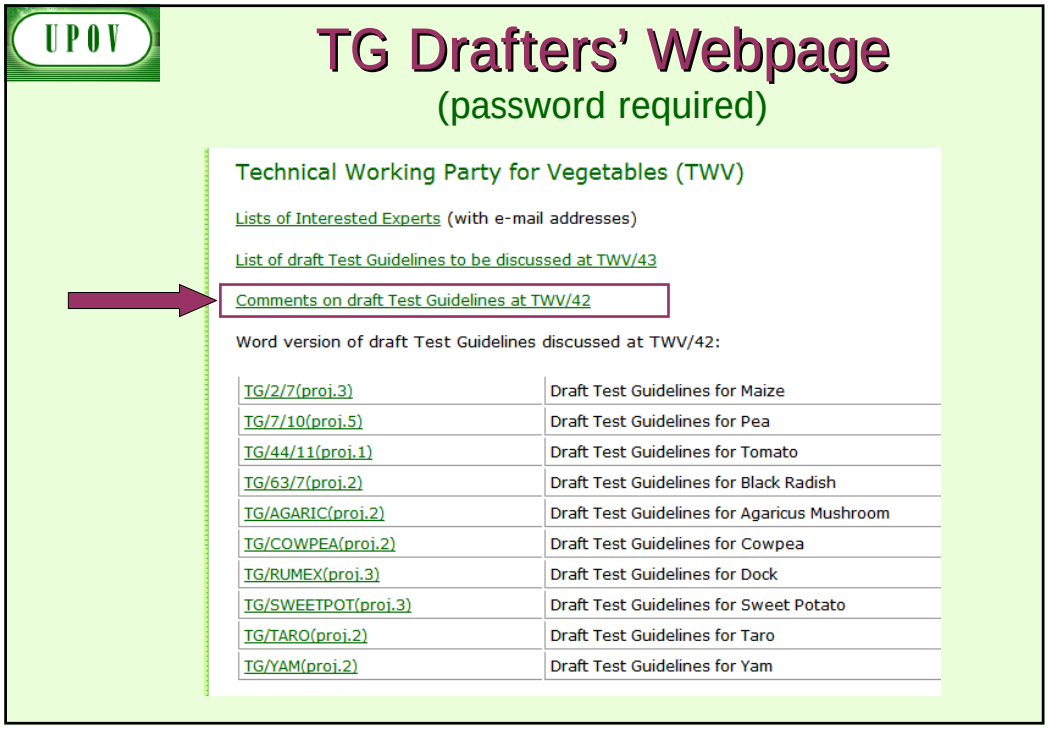
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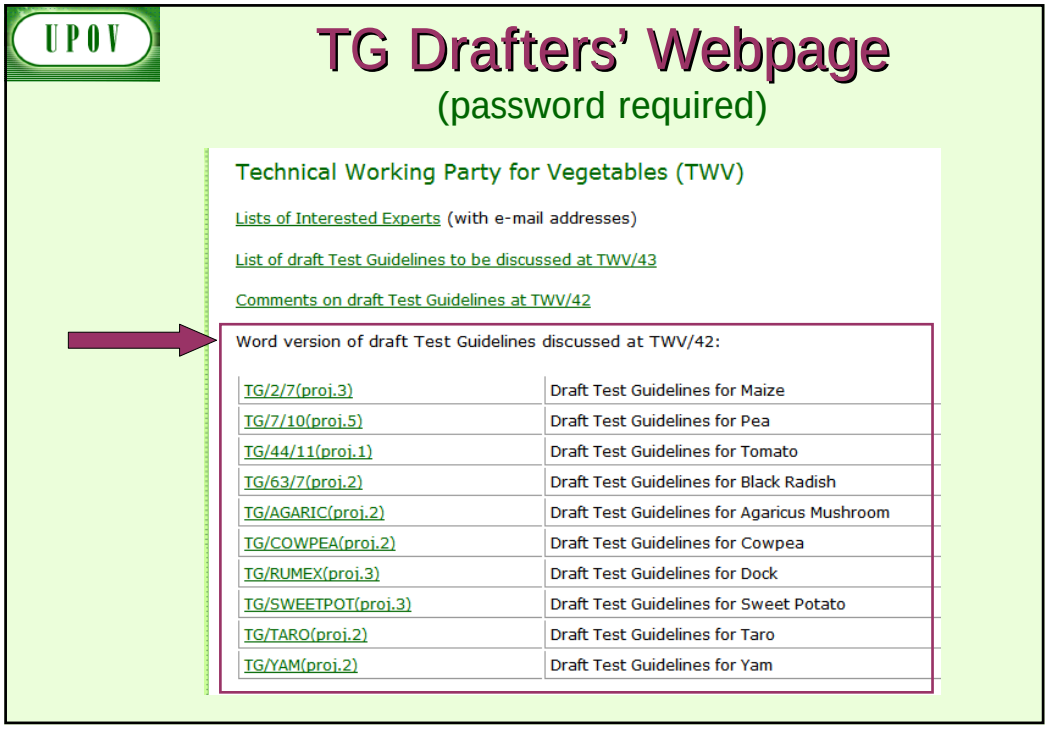


[Annex VI follows]

ANNEX VI

Presentation made by Edilberto Redoña, Senior Scientist (Plant Breeding) & Coordinator, International Network for Genetic Evaluation of Rice (INGER),International Rice Research Institute (IRRI)

38th Session of the UPOV Technical Working Party for Agricultural Crops (TWA)

Development of regional sets of example varieties for the test guidelines for rice

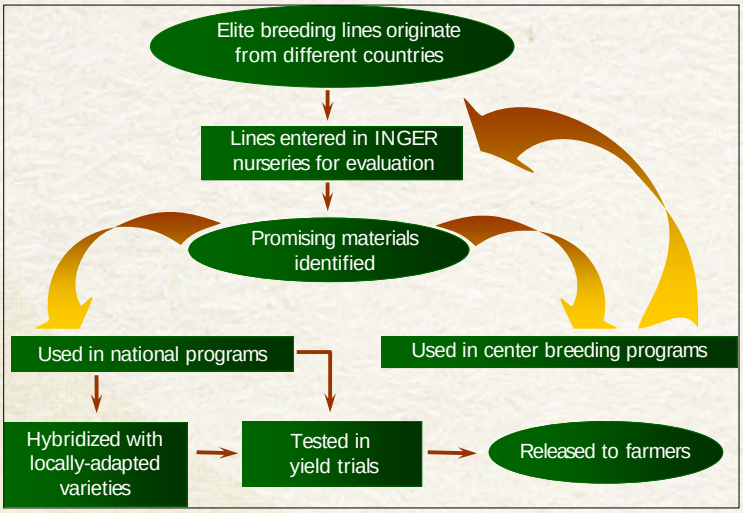
Highlights of INGER's INEVDUST, 2006-2008

INGER: Oldest Multilateral Germplasm Evaluation Network

A partnership among national agricultural research systems (NARES) and international agricultural research centers (IARCs) established in 1975

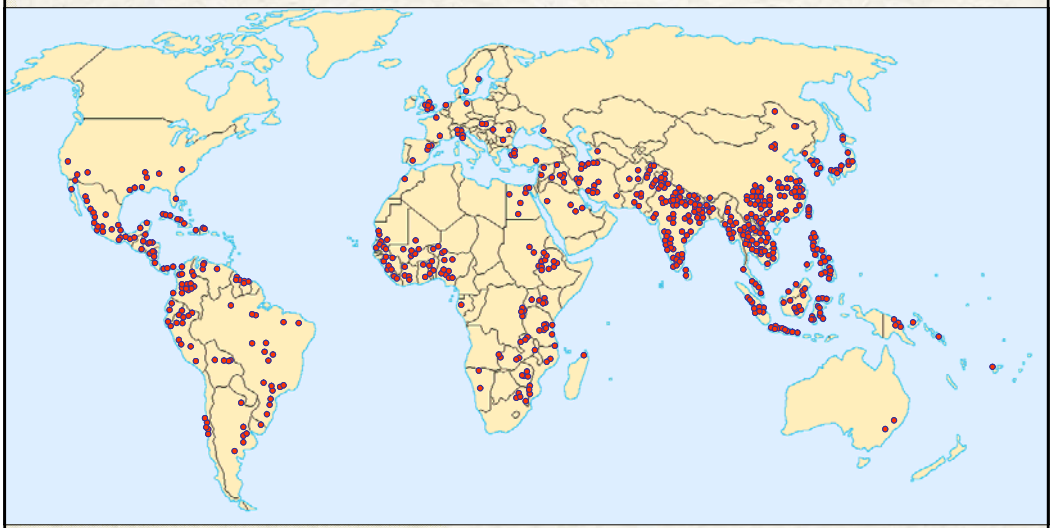
- 52,430 entries evaluated
- 2,800,848 seed samples

INGER Primary Mechanism



- 50 types of international trials since 1975
- 2004-08 (12 ecosystem-based, 14 stress-oriented; average: 16 types/year)

INGER Test Sites



- 100s of rice scientists, 600 research stations, 85 countries
- Average, 2004-2008: 115 locations, 31 countries

INEVDUST

- 2004: at the UPOV-INGER Workshop on the Protection of Plant Breeder's Rights decided to establish the International Nursery of Example Varieties for Distinctness, Uniformity and Stability Test
- To have a consistent basis for defining a state of expression of a given character (e.g. 65 characters in the UPOV Rice Test Guidelines; 17 asterisked)
- Important for harmonizing the states of expression for characteristics which are influenced by the environment particulary for asterisked characteristics

INEVDUST

- 2006 - 1st INEVDUST
  - 78 Entries from six NARS* and from IRRI
- 2007 – 2nd INEVDUST
  - 76 Entries from six NARS* and from IRRI
- 2008 – 3rd INEVDUST
  - 77 Entries from four NARS** and from IRRI
- 2009 – 4th INEVDUST
  - 77 Entries from four NARS** and from CIAT and IRRI

*NARS: Bangladesh, India, Philippines, Sri Lanka, Colombia, Taiwan

**Includes Bangladesh, India, Philippines, Sri Lanka

Objectives

- To establish rice example varieties (covering 17 characteristics) for Distinctness, Uniformity and Stability Test (DUST) in South, East, and Southeast Asia

Basis for Selecting Example Varieties

- Varieties of common knowledge
- Pure, uniform, stable
- Widely and freely available
- Ease of multiplication/maintenance
- Can be grown in both wet and dry season (tropical areas) if character of interest has to be evaluated in the field
  - photoperiod insensitive vs. photoperiod sensitive varieties
- Diverse set: All desired states of expression be covered with the minimum number of example varieties
- For regional cooperation: wide adaptation
  - can be grown in many countries with similar conditions

Priority Rice Ecosystem: Irrigated

- Favorable environment; thus the high probability of successfully conducting the trial
- Anticipated that application for PVP would be for varieties suited to this ecosystem
- Example varieties for irrigated environment could serve as example varieties for other ecosystems/other EVs could eventually be assembled by NARES

Procedure for Regional Cooperation

- Candidate EVs nominated by NARES and IRRI
- IRRI to identify candidate EVs from the IRRI Genebank, breeding programs and INGER based on asterisked characters.
- NARES candidate EVs to be sent to IRRI
- Nursery of DUST EVs will be distributed to CORRA member countries and to other interested countries
- Data collected will be sent immediately to IRRI for analysis.
- Results will be shared with participants.

INEVDUST Sites

REGION/ COUNTRY/LOCATION	2006	2007	2008
EAST ASIA			
CHINA			
WENZHOU, ZHEJIANG	✓		
HANGZHOU, ZHEJIANG		✓	✓
DPR KOREA			
RYONGSONG ,PYONG YANG	✓		
REPUBLIC OF KOREA			
SUWEON		✓	✓
SOUTHEAST ASIA			
MYANMAR			
YEZIN	✓		✓
THAILAND			
PATHUMTHANI	✓		
THANYABURI			✓
PHILIPPINES			
MUNOZ, NUEVA ECIJA		✓	

REGION/ COUNTRY/LOCATION	2006	2007	2008
SOUTH ASIA			
BANGLADESH			
GAZIPUR	✓	✓	✓
INDIA			
RAJENDRANAGAR, HYDER.	✓	✓	✓
PANTNAGAR, U.P.	✓		
PULLA, A.P.	✓		
CHINSURAH, W. BENGAL		✓	
SHALIMAR , SRINAGAR, J & K		✓	
RAIPUR, M.P.		✓	
MASODHA, FAIZABAD		✓	
KHUDWANI, ANANTNAG			✓
KANKE, RANCHI			✓
NEPAL			
HARDINATH, DHANUSHA	✓	✓	✓

Total Sites:

2006: 9 sites, 7 countries

2007: 10 sites, 6 countries

2008: 9 sites, 7 countries

Traits Observed

Trait	Stage	State					
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	40	Absent	Present				
Time of Heading (50% of plants with heads)	55	Very Early (<70 days)	Early (70-90 days)	Medium (90-110 days)	Late (>110 days)		
Flag Leaf: Attitude of Blade	50	Erect	Semi-erect	Horizontal	Recurved		
Spikelet: Pubescence of Lemma	60-80	Absent or Very Weak	Weak	Medium	Strong	Very Strong	
Lemma: Anthocyanin Coloraton of Apex (Early Observation)	65	Absent or Very Weak	Weak	Medium	Strong	Very Strong	
Spikelet: Color of Stigma	65	White	Light Green	Yellow	Light Purple	Purple	
Non prostrate varieties only: Stem Length	70-90	Very Short (<51 cm)	Short (51-90 cm)	Medium (91-130 cm)	Long (131-150 cm)	Very Long (>150 cm)	
Stem: Anthocyanin Coloration of Nodes	70	Absent	Present				
Panicle: Distribution of Awns	70-80	Tip only	Upper Quarter Only	Upper Half Only	Upper Three Quarters Only	Whole Length	
Panicle: Length of Main Axis	72-90	Short (<=20 cm)	Medium (21-30 cm)	Long (>30 cm)			
Panicle: Attitude in relation to Stem	90	Upright	Semi-upright	Slightly Drooping	Strongly Drooping		
Flag Leaf: Attitude of Blade (Late Observation)	90	Erect	Semi-erect	Horizontal	Recurved		
Panicle: Attitude of Branches	90	Erect	Semi-erect	Spreading			
Decorticated grain: Length	92	Short (<5.5 mm)	Medium (5.51-6.6 mm)	Long (>7.5 mm)			
Decorticated grain: Shape	92	Round (<1.5)	Semi-round (1.5-1.99)	Half-Spindle-Shaped (2.00-2.49)	Spindle-Shaped (2.50-2.99)	Long Spindle-Shaped (>2.99)	
Decorticated Grain: Color	92	White	Light Brown	Variegated Brown	Dark Brown	Light Red	Red
Decorticated Grain: Aroma	92	Absent or Weak	Weak	Strong			

***17 traits, 68 states of expression**

Data Analysis

- Data consistency checking
- Frequency counts of each state of expression for each trait and each variety in 3 regions during 3 years (2006-2008).
- Obtained lines that has distinct expression on each trait.
- **Lines that exhibit a predominant and distinct state of expression for a trait serve as example varieties for the specific region**

Varieties with Highest Number of Distinct Traits: East Asia

Trait	Designation								
	PSB RC 70	PSB RC 92	NSIC RC 112	NSIC RC 106	PSB RC 50	DV 85	IR 55423-01	CHIANUNG SEN YU 23	IR 25976-12-2-2-1-1
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)						absent	absent		absent
Time of Heading (50% of plants with heads)	late	very early	medium	early	medium	medium		medium	
Flag Leaf: Attitude of Blade	horizontal	semi-erect			semi-erect	erect	erect		
Spikelet: Pubescence of Lemma	strong	weak	strong			weak	absent or very weak		
Lemma: Anthocyanin Coloraton of Apex (Early Observation)	absent or very weak		absent or very weak	strong	medium		absent or very weak	very strong	absent or very weak
Spikelet: Color of Stigma (Stage 65)	white	white	white	white	purple	purple	yellow	white	white
Non prostrate varieties only: Stem Length									
Stem: Anthocyanin Coloration of Nodes (Stage 70)	absent	absent	absent	absent	absent	present	absent	absent	absent
Panicle: Distribution of Awns	tip only	tip only	tip only	tip only	tip only		whole length	tip only	whole length
Panicle: Length of Main Axis (Stage 72-90)	medium	medium	medium	medium	medium	medium		medium	
Panicle: Attitude in relation to Stem (Stage 90)	strongly drooping	strongly drooping	strongly drooping	semi-upright	strongly drooping	slightly drooping		strongly drooping	
Flag Leaf: Attitude of Blade (Late Observation)		recurved							
Panicle: Attitude of Branches (Stage 90)	semi-erect	semi-erect	semi-erect	semi-erect	semi-erect				
Decorticated grain: Length	long	short	long	long	medium		medium		medium
Decorticated grain: Shape	long spindle-shaped	spindle-shaped	long spindle-shaped	long spindle-shaped	spindle-shaped	half-spindle-shaped	half-spindle-shaped	long-spindle shaped	half-spindle-shaped
Decorticated Grain: Color	light brown	light brown	light brown	light brown		red	light brown	light brown	light brown
Decorticated Grain: Aroma									

PSB RC 70 and PSB RC 92: 13 out of 17 traits

Varieties with Highest Number of Distinct Traits: East Asia

Trait	Designation								
	IR 44	IR 54	**IR 24**	**IR 42**	**IR 48**	IR 65185-3B-8-3-2	**ESHWER KORRA**	IR 58	**W 1240**
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)			absent				present		
Time of Heading (50% of plants with heads)				late	late		very early		
Flag Leaf: Attitude of Blade	erect		erect	erect	semi-erect				recurved
Spikelet: Pubescence of Lemma	strong								
Lemma: Anthocyanin Coloraton of Apex (Early Observation)	absent or very weak	absent or very weak	absent or weak	absent or weak	absent or weak	absent or very weak		absent or very weak	
Spikelet: Color of Stigma (Stage 65)	white	white	white			white		white	
Non prostrate varieties only: Stem Length						medium	very short		very long
Stem: Anthocyanin Coloration of Nodes (Stage 70)	absent	absent	absent			absent		absent	present
Panicle: Distribution of Awns	Upper Quarter Only	Upper Three Quarters Only							
Panicle: Length of Main Axis (Stage 72-90)						medium	short		
Panicle: Attitude in relation to Stem (Stage 90)				strongly drooping	strongly drooping	Upright			
Flag Leaf: Attitude of Blade (Late Observation)	erect spreading		erect	erect	horizontal	erect			
Panicle: Attitude of Branches (Stage 90)		semi-erect		semi-erect	semi-erect				
Decorticated grain: Length		medium					short	medium	short
Decorticated grain: Shape		long spindle-shaped					round	semi-round	half-spindle-shaped
Decorticated Grain: Color		light brown	light brown	light brown	light brown			light brown	light brown
Decorticated Grain: Aroma									

Varieties with Highest Number of Distinct Traits: East Asia

Trait	Designation						
	K 39-96-1-1-1-2	IR 61979-138-1-3-2-3	**IR 73885-1-4-3-2-1-6**	**N22**	**SINA SIVAPPU**	IR 65	**PSB RC 96**
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)							
Time of Heading (50% of plants with heads)					very early		
Flag Leaf: Attitude of Blade		erect					
Spikelet: Pubescence of Lemma	medium						weak
Lemma: Anthocyanin Coloraton of Apex (Early Observation)			weak				
Spikelet: Color of Stigma (Stage 65)			white	light green			
Non prostrate varieties only: Stem Length					very short		
Stem: Anthocyanin Coloration of Nodes (Stage 70)	present		absent				
Panicle: Distribution of Awns	upper quarterly			upper half only			
Panicle: Length of Main Axis (Stage 72-90)							
Panicle: Attitude in relation to Stem (Stage 90)		Semi-upright					
Flag Leaf: Attitude of Blade (Late Observation)		semi-erect					semi-erect
Panicle: Attitude of Branches (Stage 90)					erect		
Decorticated grain: Length	medium						
Decorticated grain: Shape						long spindle-shaped	
Decorticated Grain: Color	light brown			light brown		white	
Decorticated Grain: Aroma							

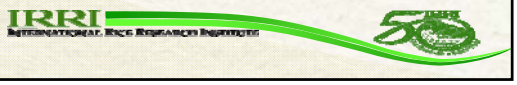
Varieties with Highest Number of Distinct Traits: South Asia

Trait	Designation									
	IR 61608-3B-20-2-2-1	FR 13 A	ARC 11554	IR 59552-21-3-2-2	MATATAG 3	PSB RC 96	DV 85	MATATA G 2	NSIC RC 106	NSIC RC 112
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent	absent	absent		absent	absent		absent	absent	absent
Time of Heading (50% of plants with heads)		late	late							
Flag Leaf: Attitude of Blade	erect	erect		recurved				erect		erect
Spikelet: Pubescence of Lemma	strong		absent or very weak	weak						
Lemma: Anthocyanin Coloraton of Apex (Early Observation)	absent or very weak	weak	strong	absent or very week						
Spikelet: Color of Stigma (Stage 65)							purple			
Non prostrate varieties only: Stem Length	short		long							
Stem: Anthocyanin Coloration of Nodes (Stage 70)				absent	absent	absent	present		absent	
Panicle: Distribution of Awns	tip only	Upper Three Quarters Only		tip only	none	none	Whole Length	none	none	none
Panicle: Length of Main Axis (Stage 72-90)					medium	medium				
Panicle: Attitude in relation to Stem (Stage 90)		Semi-upright					Upright			
Flag Leaf: Attitude of Blade (Late Observation)	semi-erect			erect						
Panicle: Attitude of Branches (Stage 90)		Horizontal	erect							
Decorticated grain: Length						spindle-shaped and long-spindle		long	long	long
Decorticated grain: Shape	half-spindle-shaped		round	long-spindle shaped	spindle-shaped	shaped		spindle-shaped	spindle-shaped	spindle-shaped
Decorticated Grain: Color	white	Light Red			white	light brown	light red	white	white	white
Decorticated Grain: Aroma	absent or weak				absent or weak	absent or weak	absent or weak	absent or weak	absent or weak	absent or weak

IR 61608-3B-20-2-2-1: most number of distinct traits in South Asia (10 out of 17 traits)

Varieties with Highest Number of Distinct Traits: South Asia

Trait	Designation								
	PSB RC 52	PSB RC 70	PSB RC 88	SINNA SIVAPPU	IR 36	IR 38	IR 50	IR 59682-132-1-1-2	IR 64
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent	absent			absent	absent	absent		absent
Time of Heading (50% of plants with heads)				very early			early		medium
Flag Leaf: Attitude of Blade	erect		erect		erect	erect			semi-erect
Spikelet: Pubescence of Lemma									
Lemma: Anthocyanin Coloraton of Apex (Early Observation)									
Spikelet: Color of Stigma (Stage 65)				white		light green	light purple		
Non prostrate varieties only: Stem Length							very short		short
Stem: Anthocyanin Coloration of Nodes (Stage 70)									
Panicle: Distribution of Awns	none	none	none		tip only	tip only		Upper Quarter Only	
Panicle: Length of Main Axis (Stage 72-90)	medium	medium	medium	short				medium	
Panicle: Attitude in relation to Stem (Stage 90)									
Flag Leaf: Attitude of Blade (Late Observation)					erect	erect	erect	semi-erect	erect
Panicle: Attitude of Branches (Stage 90)									
Decorticated grain: Length				short				medium	
Decorticated grain: Shape	long spindle-shaped	long spindle-shaped	spindle-shaped	semi-round					
Decorticated Grain: Color	light brown	light brown	light brown	absent or weak					
Decorticated Grain: Aroma		absent or weak	absent or weak		Weak			absent or weak	



Varieties with Highest Number of Distinct Traits: South Asia

Trait	Designation									
	IR 68	IR 71606-1-1-4-2-3-1-2	PSB RC 30	PSB RC 4	PSB RC 9	PSB RC 94	W 1240	IR 29	IR 48	IR 61979-138-1-3-2-3
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent	absent	absent	absent					absent	
Time of Heading (50% of plants with heads)				early					late	
Flag Leaf: Attitude of Blade	erect		erect					semi-erect		erect
Spikelet: Pubescence of Lemma										medium
Lemma: Anthocyanin Coloraton of Apex (Early Observation)		absent or very weak								
Spikelet: Color of Stigma (Stage 65)			yellow	white						
Non prostrate varieties only: Stem Length							medium			short
Stem: Anthocyanin Coloration of Nodes (Stage 70)	upper quarter only	absent					upper half only			
Panicle: Distribution of Awns		tip only			none	none				
Panicle: Length of Main Axis (Stage 72-90)	long		medium		medium	medium				medium
Panicle: Attitude in relation to Stem (Stage 90)								strongly drooping		
Flag Leaf: Attitude of Blade (Late Observation)							horizontal			
Panicle: Attitude of Branches (Stage 90)					Spreading					
Decorticated grain: Length	long						short			
Decorticated grain: Shape						long spindle-shaped		spindle-shaped		
Decorticated Grain: Color		Variegated Brown		white	white	light brown	purple		red	
Decorticated Grain: Aroma			absent or weak	absent or weak	absent or weak	absent or weak		absent or weak	strong	

Varieties with Highest Number of Distinct Traits: South Asia

Trait	Designation										
	PSB RC 102	PSB RC 60	PSB RC 92	ESHWERKORRA	IR 43	IR 58	IR 65185-2-B-8-3-2	IR 72	K 39-96-1-1-1-2	BPI 76 (NS)	IR 22	IR 40
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)							absent	present				
Time of Heading (50% of plants with heads)				very early				medium	early			
Flag Leaf: Attitude of Blade			erect						horizontal			
Spikelet: Pubescence of Lemma					weak							
Lemma: Anthocyanin Coloraton of Apex (Early Observation)					medium							
Spikelet: Color of Stigma (Stage 65)		white		purple							light green	
Non prostrate varieties only: Stem Length						very short						
Stem: Anthocyanin Coloration of Nodes (Stage 70)												
Panicle: Distribution of Awns	none											
Panicle: Length of Main Axis (Stage 72-90)		medium				medium						
Panicle: Attitude in relation to Stem (Stage 90)			slightly drooping									
Flag Leaf: Attitude of Blade (Late Observation)												erect
Panicle: Attitude of Branches (Stage 90)					horizontal							Semi-erect
Decorticated grain: Length							medium					
Decorticated grain: Shape	spindle-shaped											
Decorticated Grain: Color	white	Dark Brown	white	purple		white		dark brown		Purple		
Decorticated Grain: Aroma	absent or weak	absent or weak	absent or weak				absent or weak		absent or weak	absent or weak	absent	

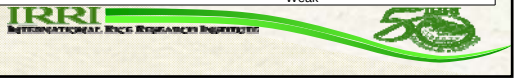
Varieties with Highest Number of Distinct Traits: Southeast Asia

Trait	Designation									
	IR 61608-3B-20-2-2-1	IR 59552-21-3-2-2	PSB RC 50	MATATAG 2	MATATAG 1	NSIC RC 110	NSIC RC 112	PSB RC 102	MATATAG 3	PSB RC 52
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent
Time of Heading (50% of plants with heads)	early	late		medium	medium	medium	medium	late	early	medium
Flag Leaf: Attitude of Blade	erect	erect	semi-erect	semi-erect	semi-erect		semi-erect	erect	semi-erect	erect
Spikelet: Pubescence of Lemma	strong	weak								
Lemma: Anthocyanin Coloraton of Apex (Early Observation)	absent or very weak	absent or very weak	very strong							
Spikelet: Color of Stigma (Stage 65)	white	white	purple	white					white	
Non prostrate varieties only: Stem Length	medium	long	short							
Stem: Anthocyanin Coloration of Nodes (Stage 70)	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent
Panicle: Distribution of Awns	none		tip only	tip only	tip only	tip only	tip only	tip only	tip only	tip only
Panicle: Length of Main Axis (Stage 72-90)	medium	medium	medium	medium	medium	medium	medium	medium	medium	medium
Panicle: Attitude in relation to Stem (Stage 90)	strongly drooping	strongly drooping	semi-upright	upright	slightly drooping	slightly drooping	slightly drooping	slightly drooping	slightly drooping	slightly drooping
Flag Leaf: Attitude of Blade (Late Observation)	erect	erect	semi-erect			recurved	recurved			
Panicle: Attitude of Branches (Stage 90)				semi-erect	semi-erect	semi-erect		semi-erect		semi-erect
Decorticated grain: Length	medium	long	medium	long	long	long	long	long	long	
Decorticated grain: Shape										
Decorticated Grain: Color	light brown	white	light brown	white	white	white	white	light brown		light brown
Decorticated Grain: Aroma	absent or weak	absent or weak								

IR 61608-3B-20-2-2-1: most number of distinct traits in Southeast Asia (15 out of 17 traits)

Varieties with Highest Number of Distinct Traits: Southeast Asia

Trait	Designation										
	PSB RC 96	NSIC RC 106	ARC 11554	IR 52713-2B-1-2	PSB RC 88	PSB RC 94	FR 13 A	IR 62141-114-3-2-2-2	N 22	PSB RC 5	W 1240
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent	absent	absent	absent	absent	absent	absent		absent	absent	
Time of Heading (50% of plants with heads)	early	early			medium	early				medium	
Flag Leaf: Attitude of Blade				erect	erect			erect			
Spikelet: Pubescence of Lemma	absent or very weak			medium							
Lemma: Anthocyanin Coloraton of Apex (Early Observation)			medium				weak		strong		
Spikelet: Color of Stigma (Stage 65)			white	purple			white	white		white	
Non prostrate varieties only: Stem Length											
Stem: Anthocyanin Coloration of Nodes (Stage 70)	absent	absent				absent			absent	absent	present
Panicle: Distribution of Awns	tip only	tip only	tip only	none	tip only	tip only	upper quarter only	none	tip only		whole length
Panicle: Length of Main Axis (Stage 72-90)	medium	medium	medium	medium	medium	medium		medium		medium	
Panicle: Attitude in relation to Stem (Stage 90)	slightly drooping	semi-upright			semi-upright	slightly drooping				upright	
Flag Leaf: Attitude of Blade (Late Observation)				erect				erect			horizontal
Panicle: Attitude of Branches (Stage 90)	semi-erect	semi-erect	erect		semi-erect						spreading
Decorticated grain: Length	long								long		short
Decorticated grain: Shape							half-spindle-shaped		half-spindle-shaped		half-spindle-shaped
Decorticated Grain: Color		Dark Brown				light brown	variegated purple				
Decorticated Grain: Aroma			strong					Weak			



Varieties with Highest Number of Distinct Traits: Southeast Asia

Trait	Designation												
	IR 43	IR 55423-01	**IR 61979-138-1-3-2-3**	IR 9202-25-1-3	**BPI 76 (NS)**	DV 85	**ESHWER KORRA**	**K 39-96-1-1-1-2**	IR 30	IR 65185-2-b-8-3-2	SINNA SIVAPPU	PSB RC 54	**PSB RC 92**	PSB RC 28
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)	absent		absent		present			present	absent					
Time of Heading (50% of plants with heads)	very early				medium		late	very early						
Flag Leaf: Attitude of Blade					horizontal									
Spikelet: Pubescence of Lemma														
Lemma: Anthocyanin Coloraton of Apex (Early Observation)						medium								
Spikelet: Color of Stigma (Stage 65)	white	white	white	white		purple			white			white		yellow
Non prostrate varieties only: Stem Length			very short	very long										
Stem: Anthocyanin Coloration of Nodes (Stage 70)		absent		absent				present						
Panicle: Distribution of Awns		none		none			tip only	upper quarter only			Upper Half Only			
Panicle: Length of Main Axis (Stage 72-90)	medium	medium		medium	medium						medium			
Panicle: Attitude in relation to Stem (Stage 90)														
Flag Leaf: Attitude of Blade (Late Observation)														
Panicle: Attitude of Branches (Stage 90)							semi-erect							
Decorticated grain: Length			long							short				
Decorticated grain: Shape		Round				Half-Spindle-Shaped						Long spindle-shaped	spindle-shaped	
Decorticated Grain: Color	white		white			Dark Purple/ Black	light red	Variegated Brown		white absent or weak	Red		light brown	
Decorticated Grain: Aroma														

Summary

Region	Number of varieties with predominant and distinct states of expression For all traits	List of varieties identified	States of expression not covered by identified varieties
East Asia	25	PSB RC 70, PSB RC 92, NSIC RC 112, NSIC RC 106, PSB RC 50, DV 85, IR 55423-01, CHIANUNG SEN YU 23, IR 25976-12-2-2-2-1-1, , IR 44, IR 54, IR 24, IR 42, IR 48, , IR 65185-3B-8-3-2, ESHWERKORRA, IR 58, W 1240, , K 39-96-1-1-1-2, IR 61979-138-1-3-2-3, IR 73885-1-4-3-2-1-6, N22, SINA SIVAPPU, IR 65, PSB RC 96	10
South Asia	41	IR 61608-3B-20-2-2-1, FR 13 A, ARC 11554, IR 59552-21-3-2-2, MATATAG 3, PSB RC 96, DV 85, MATATAG 2, NSIC RC 106, NSIC RC 112, , PSB RC 52, PSB RC 70, PSB RC 88, SINNA SIVAPPU, IR 36, IR 38, IR 50, IR 59682-132-1-1-2, IR 64, IR 68, IR 71606-1-1-4-2-3-1-2, PSB RC 30, PSB RC 4, PSB RC 9, PSB RC 94, W 1240, IR 29, IR 48, IR 61979-138-1-3-2-3, PSB RC 102,PSB RC 60,PSB RC 92,ESHWERKORRA, IR 43, IR 58, IR 65185-2-B-8-3-2, IR 72,K 39-96-1-1-1-2, BPI 76 (NS), IR 22, IR 40	6
Southeast Asia	35	IR 61608-3B-20-2-2-1, IR 59552-21-3-2-2, PSB RC 50, MATATAG 2, MATATAG 1, NSIC RC 110, NSIC RC 112, PSB RC 102, MATATAG 3, PSB RC 52, PSB RC 96, NSIC RC 106, ARC 11554, IR 52713-2B-1-2, PSB RC 88, PSB RC 94, FR 13 A, IR 62141-114-3-2-2-2, N22, PSB RC 5, W 1240, , IR 43, IR 55423-01, IR 61979-138-1-3-2-3, IR 9202-25-1-3, BPI 76 (NS), DV 85, ESHWERKORRA, K 39-96-1-1-1-2, IR 30, IR 65185-2-b-8-3-2, SINNA SIVAPPU, PSB RC 54, PSB RC 92, PSB RC 28	6

*Out of 17 traits and 68 states of expressions

Conclusions/Recommendations

- Different sets of potential example varieties identified for target regions
- Still need to identify varieties with distinct states of expression for East, South and Southeast Asia for some asterisked traits
- TWA feedback on need to continue INEVDUST
- NARES feedback at the INGER TAC

Trait	State	East Asia	South Asia	Southeast Asia
Leaf Anthocyanin Coloration of Auricles (Early-Boot Stage)				
	Absent	✓	✓	✓
	Present	✓	✓	✓
Time of Heading (50% of plants with heads)				
	Very Early	✓	✓	✓
	Early	✓	✓	✓
	Medium	✓	✓	✓
	Late	✓	✓	✓
Flag Leaf: Attitude of Blade				
	Erect	✓	✓	✓
	Semi-erect	✓	✓	✓
	Horizontal	✓	✓	✓
	Recurved	✓	✓	✗
Spikelet: Pubescence of Lemma				
	Absent or Very			
	Weak	✓	✓	✓
	Weak	✓	✓	✓
	Medium	✓	✓	✓
	Strong	✓	✓	✓
	Very Strong	✓	✗	✗
Lemma: Anthocyanin Coloraton of Apex (Early Observation)				
	Absent or Very			
	Weak	✓	✓	✓
	Weak	✓	✓	✓
	Medium	✓	✓	✓
	Strong	✓	✓	✓
	Very Strong	✓	✗	✓
Spikelet: Color of Stigma (Stage 65)				
	White	✓	✓	✓
	Light Green	✓	✓	✗
	Yellow	✓	✓	✓
	Light Purple	✗	✓	✗
	Purple	✓	✓	✓

Legend:
✓ = with distinct trait
✗ = without distinct trait

Trait	State	East Asia	South Asia	Southeast Asia
Non prostrate varieties only: Stem Length				
	Very Short	✓	✓	✓
	Short	✓	✓	✓
	Medium	✓	✓	✓
	Long	✓	✓	✓
	Very Long	✓	✗	✓
Stem: Anthocyanin Coloration of Nodes (Stage 70)				
	Absent	✓	✓	✓
	Present	✓	✓	✓
Panicle: Distribution of Awns				
	Tip only	✓	✓	✓
	Upper Quarter Only	✓	✓	✓
	Upper Half Only	✓	✓	✓
	Upper Three Quarters Only	✓	✓	✗
	Whole Length	✓	✓	✓
Panicle: Length of Main Axis (Stage 72-90)				
	Short	✓	✓	✓
	Medium	✓	✓	✓
	Long	✓	✓	✓
Panicle: Attitude in relation to Stem (Stage 90)				
	Upright	✓	✓	✓
	Semi-upright	✓	✓	✓
	Slightly Drooping	✓	✓	✓
	Strongly Drooping	✓	✓	✓
Flag Leaf: Attitude of Blade (Late Observation)				
	Erect	✓	✓	✓
	Semi-erect	✓	✓	✓
	Horizontal	✓	✓	✓
	Recurved	✓	✗	✓

Trait	State	East Asia	South Asia	Southeast Asia
Panicle: Attitude of Branches (Stage 90)				
	Erect	✔	✔	✔
	Semi-erect	✔	✔	✔
	Spreading	✔	✔	✔
Decorticated grain: Length				
	Short	✔	✔	✔
	Medium	✔	✔	✔
	Long	✔	✔	✔
Decorticated grain: Shape				
	Round	✔	✔	✔
	Semi-round	✔	✔	✔
	Half-Spindle-Shaped	✔	✔	✔
	Spindle-Shaped	✔	✔	✔
	Long Spindle-Shaped	✔	✔	✔
Decorticated Grain: Color				
	White	✔	✔	✔
	Light Brown	✔	✔	✔
	Variegated Brown	✘	✔	✔
	Dark Brown	✘	✔	✔
	Light Red	✘	✔	✔
	Red	✔	✔	✔
	Variegated Purple	✘	✘	✔
	Purple	✘	✔	✘
	Dark Purple/Black	✘	✘	✔
Decorticated Grain: Aroma				
	Absent or Weak	✘	✔	✔
	Weak	✘	✔	✔
	Strong	✘	✔	✔

Legend:
✔ = with distinct trait
✘ = without distinct trait

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[Annex VII follows]

ISF View on Intellectual Property

(Adopted in Bangalore, June 2003. Paragraph 1.2.1.1.3 on "The case of DNA markers" was adopted on 27 May 2009 by the ISF General Assembly in Antalya, Turkey)

Setting the Scene

ISF View on Intellectual Property[1]

Setting the Scene

ISF members are unanimously in favor of a strong and effective intellectual property protection necessary to ensure an acceptable return on research investment, prerequisite to encourage further research efforts, essential to meet the challenges mankind has to face in the coming years, i.e. feeding an increasing population whilst preserving the planet. These challenges cannot be met without further development of new knowledge, technologies and the more effective use of a broader base of genetic resources. All of these endeavors require substantial, long-term and high risk investments.

For plant varieties, the type of protection that is currently available varies according to the technical, legal and socio-economic status of the various countries. In all the countries, where plant varieties are protectable, a UPOV[2] or UPOV-like system is available. There are a few countries where protection through utility patents is also possible. ISF considers that both systems are legitimate. If a country envisages the adoption of a *sui generis* system to protect plant varieties ISF recommends that this *sui generis* system, as a minimum, conform to the requirements of the 1991 Act of the UPOV Convention.

The patent system also provides an appropriate protection for biotechnological inventions. In the future, the benefits of the different systems available in various countries could be evaluated and balanced into a strong intellectual property protection system that would serve to encourage the improvement of varieties using both conventional and biotechnological genetics.

1. Protection of plant varieties through Breeder's Right

1.1 What is plant breeding?

Plant breeding, very briefly, is developing new varieties through the creation of new genetic diversity by the reassembling of existing diversity with the aid of all available technologies and using strategies based upon knowledge from basic research.

Plant breeding, regardless of whether it is carried out by the public or the private sectors, requires significant human resources from many skill areas and financial investments to support the lengthy and risky processes of research and product development.

Plant varieties are protectable generally by a *sui generis* system and in some countries by patents. ISF considers that the UPOV Convention, and particularly its 1991 Act is an effective *sui generis* system for the protection of plant varieties. In addition to novelty and acceptable denomination, the three criteria a variety has to fulfill to be protectable are Distinctness, Uniformity and Stability, known as DUS. The three criteria are equally important.

1.1 Conditions for the granting of Breeder's Right

According to the UPOV Convention, for a variety to be protected, it must be:

- new
- distinct
- uniform

[1] ISF recognizes that, given all relevant prevailing and future factors, this document may necessarily be subjected to evolutionary modifications.

[2] UPOV: Union pour la Protection des Obtentions Végétales (International Union for the Protection of New Varieties of Plants)

- stable
- designated by an "acceptable designation".

The grant of the Breeder's Right shall not be subject to any further or different conditions.

1.2.1 DUS Testing

1.2.1.1 Characteristics for DUS testing

1.2.1.1.1 Basic conditions that a characteristic should fulfill to be used for the purpose of DUS testing

ISF fully supports the provisions provided for by UPOV as regards characteristics for DUS testing.

For ISF, these principles guarantee the quality and the pertinence of the Breeder's Right because they define the basic conditions that a characteristic should fulfill to be used for the purposes of DUS testing. The basic conditions are that a characteristic should:

a. result from a given genotype or combination of genotypes
(this requirement is specified in Article 1(vi) of the 1991 Act of the UPOV Convention but is a basic requirement in all cases);

b. be sufficiently consistent and repeatable in a particular environment;

c. exhibit sufficient variation between varieties to be able to establish distinctness;

d. be capable of precise definition and recognition
(this requirement is specified in Article 6 of the 1961/72 and 1978 Acts of the UPOV Convention, but is a basic requirement in all cases);

e. allow uniformity requirements to be fulfilled;

f. allow stability requirements to be fulfilled, meaning that it produces consistent and repeatable results after repeated propagation or, where appropriate, at the end of each cycle of propagation.

ISF especially draws the attention of the competent national and international authorities on plant variety protection to the scientific rigor, which should govern the definition of the systems for testing DUS characteristics. This is essential to ensure the reproducibility of the results obtained and the consistency of the observations made by different competent authorities on the same characteristic.

ISF also reasserts its total support to the guidelines for conducting DUS testing as published by UPOV after consultation with all the players involved and encourages all present and future UPOV members and others to use those guidelines, in order to harmonize the test results for Breeder's Right.

1.2.1.1.2 Classification of characteristics

ISF proposes the following classification of the characteristics used for DUS testing:

1. UPOV standard phenotypic characteristics which are the characteristics included in the individual guidelines. They are composed of the non-asterisk characteristics, the asterisk characteristics and the grouping characteristics.

2. **Additional phenotypic characteristics**

They must satisfy the general criteria of characteristics set above, have been used by at least one UPOV contracting party and submitted to UPOV.

Those characteristics are consistent with the 1991 UPOV definition of a variety ("*Variety means a plant grouping (…) defined by the expression of the characteristics resulting from a given genotype (…).*").They are mainly physiological and can be added on the list of characteristics with the agreement of the breeder.

- Yield
- Sugar content
- Pest or Disease resistances
- Herbicide tolerance

This list of additional "phenotypic" characteristics is not exhaustive and subject to changes on a crop-by-crop basis.

3. Additional convincing evidence

In general, these are protein characteristics. They should not be used for populations and synthetic varieties of cross-pollinating species. If used, that should be:

- With the agreement of the applicant,
- Only if all other characteristics failed to establish clear distinctness, despite some evidence of distinctness in UPOV standard characteristics,
- Only if a test procedure has been agreed upon between the competent authority and the applicants.

If used, they can establish distinctness only in combination with phenotypic characteristics, as indicated in categories 1 and 2[3]

ISF considers that the introduction of new characteristics for DUS testing should be made without creating new obligations on the breeders of the already protected variety. Those breeders should simply be informed by the authority that their varieties have been used in a comparison with new varieties in DUS testing using new characteristics. Only the original official reference sample of the already protected variety could be used for comparison with the "new" variety.

(The following paragraph 1.2.1.1.3 was adopted on 27 May 2009 by the ISF General Assembly in Antalya, Turkey)

1.2.1.1.3 The case of DNA markers

ISF strongly endorses the use of DNA-based markers for variety identification purposes - e.g. in the case of enforcement of IPR's - and to determine genetic conformity between varieties for use in EDV disputes. In addition, ISF favors improvements that enhance the reproducibility, efficiency and harmonization of the current Distinctness, Uniformity and Stability (DUS) testing and examination process, while maintaining the current scope of protection. Plant breeders quickly apply modern technologies for their work.

[3] This means that phenotypic characteristics may give two levels of evidence:
- the first level that can be used alone
- the second level needing additional evidence given by non phenotypic characteristics

ISF considers that DNA-based markers can be useful in the DUS testing and examination process as follows:

- When DNA-based markers are fully predictive of the expression of phenotypic DUS characteristics (UPOV option 1a, as outlined in UPOV documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add.).
- When used for the calibration of DNA-based markers with respect to the expression of phenotypic characteristics in the management of reference collections (UPOV option 2) and in the proper planning of DUS trials. The use of phenotypic descriptors together with DNA based data can be acceptable for these purposes provided that no phenotypically similar varieties, which are essential for comparison, are omitted.

However, ISF is cautious in expanding the use of DNA-based markers in the field of DUS testing and examination beyond these uses because:

- Except for some specific cases, DNA-based markers may not be predictive of the expression of phenotypic characteristics used in DUS testing and examination due to the relatively complex genetic control of many phenotypic characteristics.
- The use of molecular markers on their own, without a link to a phenotypic characteristic or without use of a distance threshold, could create a significant risk of decreasing the minimum distance between varieties to the extreme (e.g. only one base pair), thus jeopardizing the Breeder's Right.
- If used for Distinctness, then these DNA-based markers also need to be used for Uniformity and Stability and might also be used for checking the hybrid parental formula. This could, at least at the present time, have considerable practical, technical and financial consequences.
- DNA-based markers or the methods to detect them may not be publicly available.
- Consensus between UPOV members upon the use of DNA-based markers in the DUS examination process is necessary in order to obtain international acceptance of DUS examination reports. Therefore it is necessary to agree on a harmonized approach before implementing the use of DNA-based markers in the different national DUS examination processes and consider the need for a transitional period.

Each of these problems needs to be addressed before ISF could consider expanding their use.

ISF supports the work of the BMT (UPOV Working Group on Biochemical and Molecular Techniques, and DNA profiling in particular) to find acceptable applications of DNA-based markers in the field of DUS testing. In particular, the BMT should address the following issues:

- The development of DNA-based markers that are fully predictive of the expressions of the phenotypic DUS characteristics, especially those that are laborious, time consuming or expensive to test;
- The development of methods to use DNA-based markers in combination with phenotypic DUS characteristics for the more efficient management of reference collections and DUS trials;
- The impact of using the same set of DNA-based markers that are used for Distinctness, also for determining Uniformity and Stability. This issue is a critical concern for ISF.
- The effect of rapidly changing DNA-based marker techniques on the use of DNA-based markers in the DUS examination.

- The financial impact of using DNA-based markers in the DUS examination whether as additional tool or in substitution of other means of examination.
- The availability of DNA fingerprints which are made to enhance the DUS examination.

ISF concludes that DNA-based markers can be used for identification of varieties, for determining genetic conformity between initial and putative essentially derived varieties, for improvement of the management of reference collections and planning of DUS trials and, for those DNA-based markers that are fully predictive of the expressions of DUS characteristics, to simplify the testing of these characteristics.

ISF considers that with the present state of the art, the use of DNA-based markers alone for establishing DUS, could significantly decrease the scope of protection and should therefore not be accepted.

1.2.1.1.4 The special case of disease resistance

Today, one of the essential components of genetic progress provided by plant varieties lies in their ability to offer effective resistance to a considerable range of diseases and pests affecting agricultural plants.

As far as the disease resistance characteristics are concerned, ISF supports any initiative making it possible to use them as characteristics of Distinctness in DUS testing, insofar as:

- They generally satisfy the basic conditions mentioned above in paragraph 1.2.1.1.1;
- And, in particular:
  - The resistances should be clearly defined, notably by specifying the Genus, the species, and if need be the pathotype concerned by the resistance. In case of several races, the race should also be defined;
  - Their evaluation should be covered by a standardized method and this should be available through a known publication or once incorporated into the guidelines for testing the species concerned.
- A different resistance level is only admissible as a characteristic enabling distinctness to be decided on if the levels of expression can be clearly established and if the test results are consistent and technically reliable;

It is extremely likely that a new protected variety differing only by a disease resistance characteristic from an already existing variety would be considered as essentially derived from that already existing variety.

1.2.1.1.5 The special case of “converted” varieties

By “converted” variety, ISF understands a variety which has been obtained from a pre- existing variety by techniques such as gene transfer, multiple back-crossing leading to a “new” variety differing from the pre-existing one only by the newly included characteristic. Such a converted variety should be considered as essentially derived from the initial variety from which it is derived.

- In order to assess distinctness between the “converted” and the pre-existing varieties, ISF considers it necessary to comply with the UPOV principles stating that a variety is “defined by the expression of the characteristics resulting from a given genotype or combination of genotypes”. In addition, in accordance with the 1978 and the 1991 Acts of the UPOV Convention, ISF considers that in the

distinctness assessment procedure only the inherent nature of the variety counts, without indicating the methods of development.

- Consequently only converted varieties having a clear phenotypic difference can be considered as distinct from the pre-existing variety. If the differentiating characteristic is not included in the list of the UPOV characteristics, that characteristic should be added in the list by the Breeder's Right office as an additional phenotypic characteristic, at the request and/or with the agreement of the breeder. The characteristic fulfils the basic conditions requested by UPOV.
- The following examples illustrate the ISF position:
  - **a.** A variety and its herbicide tolerant form to a given herbicide should be considered as distinct (assessment of distinctness should include the spray of the herbicide).
  - **b.** Two "identical" varieties tolerant to the same herbicide but through different mechanisms of tolerance should not be considered as distinct. This does not preclude the protection of the two different mechanisms by patents if the patenting criteria are met.
  - **c.** A male sterile line should be considered as distinct from its male fertile counterpart.
  - **d.** Male sterile forms of a variety obtained *via* for instance different cytoplasms should not be considered as distinct.

If the application for Breeder's Right for a converted variety is lodged by the owner of the pre-existing variety or by an authorized licensee of the owner of the pre-existing variety, and if the converted variety differs from a pre-existing variety only by the introduced characteristic, then, a fast-track procedure for assessing distinctness should be possible. If, during the procedure, other differences are discovered in addition to the introduced characteristics, then, the variety should undergo the normal DUS testing procedure.

1.2.1.1.6 Varieties of common knowledge and management of reference collections: promoting a global variety phenotypic description database

One of the difficulties in assessing distinctness is the increasing number of plant varieties protected in countries member of UPOV. ISF believes that in order to overcome that difficulty the use of DNA markers is not the right approach as in fact the limiting factor is not the lack of phenotypic characteristics but the handling of the reference collections. In order to facilitate that handling, ISF considers that:

- In-depth collaboration, both among PVP offices and between PVP offices and breeders should be encouraged.
- The examination reports belong to the breeder who has paid for the examination procedure. On the request of the breeder the examination reports should be sent free of charge but for a reasonable handling fee to other PVP[4] offices.
- UPOV and other relevant bodies should investigate as soon as possible the feasibility of a worldwide database of phenotypic description of varieties of common knowledge, at least including but not necessarily limited to varieties protected under the UPOV system. This would facilitate distinctness testing. In particular, in countries, where applicable, the database will be used for grouping comparable varieties and the candidate variety for testing. It would also be useful to plant breeders prior to the application for Breeder's Right. The

[4] PVP offices means Plant Variety Protection authorities in charge of granting Breeder's Right.

database should only contain the phenotypic characteristics indicated in the UPOV Guidelines. Those characteristics are not confidential business information and must be publicly available.

ISF also considers that basing the preliminary examination on the data submitted by the breeder should also contribute, to a large extent, to facilitate the application of the UPOV Convention to all species.

ISF urges UPOV and other relevant bodies to investigate the feasibility of establishing such a database.

1.2.1.1.7 Clear distinctness

The clear distinctness, in general known as minimum distance, that should exist between two plant varieties so that they are considered distinct according to the UPOV Convention is a difficult question, which creates debate between the concerned parties.

In order to avoid jeopardizing the Breeder's Right, ISF considers that the minimum distance necessary to declare clear distinctness should not be so narrowed as to impair the protection.

Aware of the biological, genetic and physiological specificities of each plant species, ISF recommends a species-by-species approach of this question.

1.2.2 Novelty

The variety shall be deemed to be new if, at the date of filing of the application for a Breeder's Right, propagating or harvested material of the variety has not been sold or otherwise disposed of to others, by or with the consent of the breeder, for purposes of exploitation of the variety within specific time limits in or outside the territory of filing.

These conditions should apply for all kinds of varieties, be they sexually or asexually reproduced, pure lines, populations, hybrids of different kinds. Hybrid parental lines as well should be considered as subject to these conditions as are any other plant varieties.

For several reasons, and in particular to receive best effective protection for the most important achievements of plant breeding and for strengthening their rights by the implementation of the concept of essential derivation, plant breeders are most interested in the protection of parental lines.

Some offices are arguing that parental lines of hybrids which have already been produced and/or sold are not novel on the ground that the seed of the hybrid variety represents "the harvested material of the parental lines".

ISF considers that interpretation as not correct:

- Obviously it is not valid for the male parent.
- It is not valid either for the line used as the female parent of the hybrid as, if we plant the product harvested on the female parental line, the progeny will not be the female parental line itself. That means that the interpretation considering that the hybrid variety represents the harvested material of the parental lines is not consistent with the UPOV definition of a variety, considered as a unit with regard to its suitability to be propagated unchanged.

Of course parental lines have to fulfill the normal novelty criteria as do any other varieties: they have not been sold or otherwise disposed of to others, by or with consent of the breeder, for purposes of exploitation of the variety.

1.3 Exception to Breeder's Right

1.3.1 Breeder's exception

Article 15.1 of the UPOV Convention provides for exceptions to the Breeder's Right and in particular for "acts done for the purpose of breeding other varieties" and except in case of essential derivation for commercialization of the new variety (-ies) obtained, known as the Breeder's Exception.

ISF considers that exception as meaning that a plant breeder can use, for further breeding, protected varieties in accordance with the UPOV Convention he has had access to lawfully. This does not mean that access and use of such protected varieties cannot be subject to restrictions under other international and/or national law.

As parental lines are very often not put on the market as such, some protection offices argue that one of the conditions for granting Breeder's Right to that kind of varieties should be the putting at the disposal of third parties, on request, of the seed of the variety.

ISF opposes strongly that interpretation on the following grounds:

- Legally speaking to impose an additional condition for the granting of Breeder's Right would be contrary to the UPOV Convention which states that no further or different conditions than in article 5 of the 1991 Act must be required. The parallel made with "enabling disclosure" in the patent laws is irrelevant, one of the main differences between Breeder's Right and patents being in fact the breeder's exception.
- The objective of the breeder's exception is to give access to PVPed genetic resources that are commercially available allowing their use for further breeding. In the case of hybrids, the genetic variability of the parent lines is available through the respective hybrids which are on the market. Breeding a distinct hybrid variety from a released hybrid variety needs more time and effort than using straight away a parent line in order to breed another valuable parent line. The latter would obviously be an infringement of the interest of the owner/original breeder of that first parent line, when done by a third party. For that reason the breeder of the first parent line is not obliged to disclose that parent line to other parties, even if it is protected by Breeder's Right.

1.3.2 Farm saved seed

From the start of agriculture farmers have saved seed from their own crops for re-sowing the following year. In fact that practice was normal and indeed is still essential in circumstances where the only seed available to plant a new crop is seed harvested from a prior season on-farm harvest. Seed that is saved by farmers from the growing of cultivars they have selected themselves does not impact the rights of third parties.

Since the end of the 19th Century, but particularly during the 20th Century, scientific plant breeding based on accumulated new genetic knowledge and new technologies has rendered the development of new cultivars much more efficient than in the past leading to the emergence of a new category of people, the professional plant breeders. Those plant breeders have created and are still creating new cultivars

used by an increasing number of farmers worldwide. The new cultivars integrating more and more genetic variability, together with improved cultural practices have resulted in a dramatic increase in food and fiber production

The consequence of that necessary evolution is that plant breeding is no longer a by-product of agriculture, but a separate activity as such. That activity was first undertaken by the public sector. However, progressively during the past century the private sector became increasingly involved, investing heavily in time and money for developing pioneering and inventive new products. The only solutions for the private plant breeders to be paid and to get return on their large investments are either to produce and sell the seed of their varieties themselves or to obtain royalties on seed of their varieties produced by others. This is the reason why an International Convention, the UPOV Convention, finally recognized the concept of Breeder's Right in 1961.

In order to evolve step by step the fathers of the Convention proposed to limit the scope of Breeder's Right to the production, for commercial marketing, of the reproductive or vegetative propagating material of the new variety, and for offering for sale or marketing such material. That was an implicit recognition of the so-called "farmer's privilege".

Thirty years later, in 1991, the Convention was reviewed and the reference to "commercial marketing" was cancelled, thus suppressing the "farmer's privilege". However two exceptions to Breeder's Right in this respect were maintained:

- A compulsory exception for acts done privately and for non-commercial purposes, thus covering farm saved seed produced by subsistence farmers.
- An optional exception, within reasonable limits and subject to the safe-guarding of the legitimate interests of the breeder, of the Breeder's Right in order to permit farmers to use for propagating purposes, on their own holding, the product of the harvest which they have obtained by planting, on their own holding, of the protected variety.

So, the Breeder's Right has been introduced progressively and cautiously over the 2nd part of the 20th century, taking into account the evolution of plant breeding, the agricultural and socio-economic situations of farmers, and the requirements for food production and environmental security for society as a whole.

ISF members consider that a strong and effective intellectual property protection is necessary to ensure an acceptable return on a research investment and to encourage further breeding and research that will be essential to meet the challenges mankind has to face in the coming years, i.e. feeding an increasing population whilst preserving the planet.

ISF members are strongly against any "farmer's privilege" going beyond the provision of the 1991 Act of the UPOV Convention, i.e. within reasonable limits in terms of acreage, quantity of seed and species concerned and subject to the safe-guarding of the legitimate interest of the breeders in terms of payment of a remuneration and information. The recommendation adopted by the Diplomatic Conference of 1991, indicating that the optional exception "should not be read so as to be intended to open the possibility of extending the practice commonly called "farmer's privilege" to sectors of agricultural or horticultural production in which such a privilege is not a common practice on the territory of the contracted party concerned" must also be taken into account.

Finally ISF members consider that any national legislation authorizing farm saved seed without reasonable limit and without safeguarding the legitimate interest of the breeders is not in conformity with the 1991 Act of the UPOV convention. In addition

it would not be an effective *sui generis* system in the meaning of the article 27.3.b of the TRIP's agreement.

1.4 Essential Derivation

1.4.1 Definition of essential derivation

Article 14.5(b) of the 1991 Act of the UPOV Convention states that a variety shall be deemed to be essentially derived from another variety, the initial variety, when

i) it is predominantly derived from the initial variety, or from a variety that is itself predominantly derived from the initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety;

ii) it is clearly distinguishable from the initial variety and;

iii) except for the differences which result from the act of derivation, it conforms to the initial variety in the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety.

Essentially derived varieties may be obtained, for example, by selection of natural or induced mutants, by selection of a somaclonal variant, by selection of variant individual plants in the initial variety, by backcrossing or transformation by genetic engineering.

1.4.2 ISF consideration on essential derivation

ISF strongly supports this concept of essentially derived varieties (e.d.v.) which allows the new technological developments to be taken into account. It has also the potential to drastically decrease the risk of plagiarism in plant breeding. ISF also considers that this principle, whilst appropriately strengthening Breeder's Right, does not restrict the breeder's exception, a key feature of the UPOV Convention.

ISF notes that even if there are not yet international agreed-upon professional rules and usages for assessing essential derivation and for solving disputes, the concept has already greatly contributed to avoid infringement, breeders being more careful in their breeding programs.

As will be shown in the following, this principle mainly involves questions of scope of protection and enforcement of the rights of the breeder. It is, therefore, left to the initiative of the breeder to enforce these rights. ISF stresses that the determination of essential derivation is not part of the procedure of the granting of the Breeder's Right. However, registration data of the varieties based on UPOV guidelines should be available after granting of rights.

1.4.3 ISF interpretation of article 14.5 of the 1991 Act of the UPOV Convention

i) The **technical aspect**

For a variety to be considered as essentially derived, it must fulfill three requirements in relation to the initial variety while retaining the expression of the essential characteristics of the initial variety:

- clear distinctness in the sense of the UPOV Convention;
- conformity to the initial variety in the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety;

- predominant derivation from an initial variety.

If one of these requirements is not fulfilled, there is no essential derivation.

ii) The **legal aspect**

The principle of dependence only exists in favor of a non essentially derived protected variety. This means that:

- the initial variety must be a protected one;
- dependence can only exist from one protected variety alone;
- an essentially derived variety can be directly derived from the initial variety or from a variety that is itself predominantly derived from the initial variety. It is possible to have a "cascade" of derivation. However, each essentially derived variety shall only be dependent on one, the protected initial variety. A cascade of dependence shall not exist, the principle having been introduced to better protect the breeder of the initial variety and not those having made derivations from his work.

Essential derivation is a matter of fact whereas dependency resulting therefrom is a possible legal consequence. Therefore, if an e.d.v. has been claimed and proved as such with legal validity, it remains an e.d.v. forever. Even if the protection period of the i.v. has been exhausted, a variety derived from the first variety in a chain of essentially derived varieties remains an e.d.v. and the remaining varieties in the chain will still be essentially derived from the i.v., but not dependent of that no longer protected variety. The reason for this lies in the spirit of the concept of dependency. This principle has mainly been introduced to protect more efficiently the initial breeder and not those who make derivations from his work.

1.4.4 Assessment of essential derivation

The assessment of essential derivation takes place after establishing that a variety is clearly distinguishable from all varieties which are a matter of common knowledge and should consider the following requirements:

- conformity to the initial variety in the expression of the essential characteristics that result from the genotype or the combination of genotypes of the initial variety;
- predominant derivation from the initial variety.

The first requirement could be based on reliable phenotypic characteristics: either close relationship in general which could lead to a “conformity threshold” parallel to the minimum distance threshold used for distinctness or only small differences in some simply inherited characteristics. If this requirement is considered as fulfilled, then, we have to assess the second one, which is “predominant derivation from the initial variety”.

Predominant derivation from the initial variety implies that the initial variety or products essentially derived therefrom have been used in the breeding process.

In order to prove that use, various criteria or a combination thereof may be used:

- combining ability
- phenotypic characteristics
- molecular characteristics
- breeding records.

1.4.5 Burden of Proof

According to the general rule of burden of proof**,** it is to the owner of the initial variety to prove essential derivation and then claim dependency. However if the owner of the i.v. can give reasonable evidence of essential derivation (*prima facie* proof), ISF is in favor of the reversal of the burden of proof. For *prima facie* proof, the following elements should be sufficient:

- strong phenotypic similarity;
- only small differences in some simply inherited characteristics;
- strong genetic similarity.

If the owner of the i.v. has fulfilled one of the above requirements, then the second breeder would have to prove that there is no predominant derivation, or that he had not used the i.v., or a variety essentially derived from that i.v..

The use of distance coefficients to define a threshold which would be a trigger point for the reversal of the burden of proof is another interesting approach. Up to now, ISF has mainly worked on thresholds based on distances measured by molecular markers. Geneticists and statisticians consider that technically it is equally possible to measure distance coefficients using morphological markers but that these distances are not always reflective of genetic distances or of pedigree relationships. Additionally, use of morphological characteristics would probably be more difficult due to environmental factors, and much more expensive.

The threshold would divide the scale of conformity into two parts: below the threshold there would be no presumption of essential derivation, above the threshold there would be presumption of essential derivation and the burden of proof of non predominant derivation would fall on the breeder of the putative e.d.v.

The threshold will certainly vary from species to species, depending on the existing genetic variability within the species and the established breeding procedures[5].

ISF recommends to its members, in any case of dispute, to first enter into a conciliation or arbitration procedure according to ISF Conciliation and Arbitration Procedure Rules before resorting to legal action.

1.4.6 Entry into force

After careful consideration of the economic, legal and technical aspects involved, the following is concluded:

In the case of implementation of the 1991 Convention (see chapter IX of the 1991 revised text of the UPOV Convention), the national laws should include the following:

i) All existing Breeder's Right before implementation should be regarded as independent and should enjoy all the rights given by the revised Convention.

[5] ISF sections/members are working on the definition of a possible threshold for various species, in order to put this legal concept into practice. Studies have been carried out on tomato, rye grass, maize, and results have been published. Studies are going on on lettuce and oilseed rape.
In addition some maize breeders are working on a contractual solution for implementation of the e.d.v. concept by defining a free "green" zone without dependency, a "red" zone with automatic dependency and an "orange" zone in between where a possible dispute should preferably be settled through arbitration. Such "agreement", which balances the interest of a free "green" zone with a systematic dependency "red" one, will be binding only on the signatories.

ii) Nevertheless, only where such a protected plant variety is not itself an essentially derived variety (e.d.v.) should the holder enjoy the rights under article 14, par. 5 of the revised Convention.

iii) All e.d.v. for which an application for Breeder's Right has been filed or acts mentioned in article 14, par. 1 of the revised Convention have been done first on or after the implementation date should be subject to the new concept of e.d. and dependency.

iv) The date of filing an application for Breeder's Right should be decisive and not the date of granting Breeder's Right.

v) There should be no difference between the date of application and acts with the plant variety because at the date of application it can be imputed that acts have already been done with this variety (e.g. production of propagating material).

1.5 Distinctness and Essential Derivation

The finally adopted definition of essentially derived varieties during the Diplomatic Conference of March 1991 is such that it could be possible to confuse the concepts of distinctness and essential derivation. This possibility would be increased if DNA markers were to be used to determine distinctness or if they were used prematurely without prior studies to help determine edv status. The risk would be to have first overlap and then confusion of the two notions.

As it is clear that the two concepts are legally different, ISF considers that it would be a mistake to confuse them for the following reasons:

- the assessment of distinctness is based on clear difference between expressed characteristics;
- the assessment of essential derivation is based on conformity of the essential characteristics resulting from the genome;
- the question of distinctness is a question of granting the right whereas the question of essential derivation is a question of the scope of protection.

Furthermore, the decision of distinctness and then of granting the property title (if the variety is also new, uniform and stable) is the responsibility of official services, whereas the demonstration of essential derivation is the business of the holder of the right of the presumed initial variety.

For these reasons, ISF considers that:

- there are good grounds to maintain separately the two notions of distinctness and essential derivation;
- for these reasons, it is necessary as far as possible to use different tools for defining the two concepts, using phenotypical characteristics for DUS testing;
- assessment of essential derivation could be based on variety origin, breeding methods, heterosis, appropriate phenotypic and/or genotypic characteristics.

1.6 Goals of ISF

ISF is committed to take actions to strengthen the 1991 Act of the UPOV Convention by striving for:

- A strict interpretation of the Exceptions to the Breeder's Right;
- A strong, practical and enforceable e.d.v. system;
- A better protection of parental lines that have not been sold, exploited or otherwise disposed of;

- Ratification of the UPOV 1991 Act by all UPOV members.

2. Legal protection of biotechnological inventions

For biotechnological inventions, ISF considers that the most appropriate protection is through patents, provided, of course, that the patentability criteria, namely novelty, industrial application and non-obviousness, are fulfilled.

The patent system should provide strong and enforceable protection of claims that are a fair balance between enabling disclosure and prior art. Protection by patent of a biotechnological invention should not be exhausted when that biotechnological invention, inserted in a plant variety is used by others.

Novel plant breeding procedures or genetic engineering methodologies in which the procedures or methodologies are decisive for achieving an inventive result should be eligible for patent protection.

ISF notes that many of the issues that have been raised with respect to the legal protection of biotechnological inventions by patents have been solved by legislation, examination guidelines, decisions by Courts and Opposition Boards. While these developments are not global and only partly implemented, ISF notes with satisfaction the following positive signals:

- Sequences or partial sequences of genes are subject to the same criteria of patentability as in all other areas of technology (novelty, inventive step and industrial application) such that the industrial application (utility) must be disclosed in the patent application as filed.
- In other words, it is accepted that a mere DNA sequence or nucleotide without indication of a function does not contain any technical information and is not a patentable invention
- It is accepted that a utility must be specific to the subject matter claimed, that it must be credible for a person of ordinary skill and be practical, meaning attributing a real world value to the claimed invention
- Biological material that is isolated from its natural environment or produced by means of a technical process may be patentable even if it previously occurred in nature;
- Protection conferred by a patent on a biological material possessing specific characteristics extends to biological material obtained through propagation or multiplication if possessing the same characteristics
- Protection for a process that enables biological material to be produced and which possesses specific characteristics extends to biological material directly obtained through that process and to its progeny.

ISF is however convinced that there is substantial room for improvement in terms of speed and quality of patent examination, opposition and litigation procedures and is concerned that the costs involved in these procedures are often detrimental to the quality and enforceability of patents in general. ISF therefore urges governments to give the necessary means in terms of human resources and skills to the patent offices and courts. ISF is also in favor of complete transparency at all steps of the patent examination by giving to anybody a full and instant access to the examination file.

3. The Coexistence of Breeder's Right and Patents

As already indicated in this document, ISF considers that Breeder's Right (and patent for plant varieties where allowed by law) and patent protection for biotechnological inventions, are efficient protection systems. It is thus necessary to define a fair coexistence of the two rights.

The introduction of the concepts of essential derivation and dependency in the 1991 Act of the UPOV Convention is a welcome initiative to bridge the two systems, in the interest of all the actors involved.

However further clarification is needed as regards the use of transgenic varieties containing patented elements and protected by Breeder's Right for further breeding. ISF is strongly attached to the breeder's exception provided for in the UPOV Convention and is concerned that the extension of the protection of a gene sequence to the relevant plant variety itself could extinguish this exception.

Therefore ISF considers that a commercially available variety protected only by Breeder's Rights and containing patented elements should remain freely available for further breeding. If a new plant variety, not an essentially derived variety resulting from that further breeding, is outside the scope of the patent's claims, it may be freely exploitable by its developer. On the contrary, if the new developed variety is an e.d.v. or if it is inside the scope of the patent's claims, a consent from the owner of the initial variety or of the patent must be obtained.

ISF is not generally in favour of compulsory licensing. Unrestricted compulsory licensing would make meaningless the new concept of dependency as well as the protection by patent on "biotechnological inventions". ISF acknowledges the principle of compulsory licensing in case of public interest as provided for in patent laws. ISF has also considered the concept of compulsory licensing in case of "significant technical progress of considerable economic interest", as provided for in the European Directive for the protection of biotechnological inventions and which is in line with the provision of the TRIP's agreement. However, the implementation of such a clause would have to be left to courts and thus be time-consuming and expensive. ISF considers that in any case, the best solution is to encourage contractual voluntary licensing for both essentially derived varieties and patented traits.

[Annex VIII follows]

ANNEX VIII

PRACTICAL GUIDE FOR DRAFTERS (LEADING EXPERTS)
OF UPOV TEST GUIDELINES[1] (April 2009)

TEST GUIDELINES FOR DISCUSSION AT THE TECHNICAL WORKING PARTY

(a) Test Guidelines to be re-discussed by the TWP

- Please use the Word version of the draft Test Guidelines prepared by the Office for the TWP session as the starting point for the subsequent year's draft (it will be correctly formatted) and incorporate all agreed changes as recorded in the TWP report; then repeat the process in (b) and (c) below
- The necessary information is provide in the UPOV website at http://www.upov.int/restricted_temporary/tg/index.html

Unless otherwise agreed at the TWP session, or thereafter by the TWP Chairperson, the timetable for the consideration of draft Test Guidelines by the Technical Working Parties is as follows:

(b) Draft for circulation to the subgroup of interested experts

Timing:	The deadline for circulation by the Leading Expert to the Interested Experts (Subgroup) is provided in an **Annex to the TWP report**	
Circulation of Subgroup draft by Leading Expert		14 weeks before the TWP session
Format:	Draft Test Guidelines should be prepared using the **Electronic TG Template** (http://www.upov.int/restrict/en/tg-rom_word/index.html)	
Sources of information:	**Drafter's webpage** (http://www.upov.int/restricted_temporary/tg/index.html): – adopted TGs in Word format & Word versions of TWP drafts – TGP/7 Annex 4 "Collection of Approved Characteristics" – Subgroup of Interested Experts	
Circulation and comments:	The Leading Expert (not the Office) circulates the draft to the Interested Experts. The list of Interested Experts is provided in an **Annex to the TWP report and on the Drafter's webpage**. A deadline for comments to be made by the subgroup of Interested Experts is provided in the same **Annex to the TWP report**.	
Comments to be received from Subgroup:		10 weeks before the TWP session

[1] *Note: drafters should read TGP/7 "Development of Test Guidelines", in particular Section 2 "Procedure for the Introduction and Revision of UPOV Test Guidelines".*

(c) Draft for the TWP session

Timing:	The deadline for the draft to be submitted to the Office of the Union (Office) is provided in the **Annex to the TWP report**	
Sending of draft to the Office by the Leading Expert		6 weeks before the TWP session
Format:	Draft Test Guidelines should be prepared with the **Electronic TG Template** (http://www.upov.int/restrict/en/tg-rom_word/index.html) All characteristics in the Table of Characteristics should be numbered in sequence without letters (i.e. 1, 2, 3, not 1, 2, 2(a), 3) (previous numbering can be shown in brackets, e.g. "5. (old 4.)" **Revisions (track change)** mode should **not** be used: Additions can be indicated (manually) by highlighting & underlining ~~Deletions~~ can be indicated (manually) by highlighting & strikethrough Different colored text should **not** be used to indicate comments / changes Illustrations should be inserted as shown on the following page	
Posting of draft on the website by the Office		4 weeks before the TWP session
"Final" drafts:	Drafts at the "final" stage should have no missing information from any chapter of the Test Guidelines and should include, for example, explanations of characteristics contained in the Table of Characteristics and an appropriate set of example varieties.	

In cases where *either* of the deadlines for circulation of the Subgroup draft or for the sending of the draft to the Office by the Leading Expert is not met, the Test Guidelines would be withdrawn from the TWP agenda and the Office would inform the TWP accordingly at the earliest opportunity (i.e. not later than 4 weeks before the TWP session). In those cases where draft Test Guidelines are withdrawn from the TWP agenda because of failure by the Leading Expert to meet the relevant dates, it would be possible for specific matters concerning those Test Guidelines to be discussed at the TWP session. However, to consider specific matters it would be necessary for a document to be provided to the Office at least 6 weeks before the TWP session.

TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE (TC)

- The **Office will prepare the draft** Test Guidelines for the TC.
- Please provide all missing information requested in the TWP report by the date specified in the **Annex to the TWP report**, but please **do not** provide that information in the form of revised Test Guidelines containing that information.

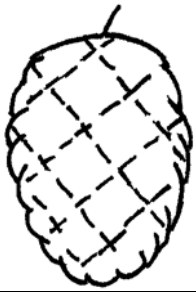
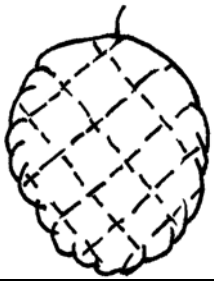
INSERTING IMAGES INTO THE TEST GUIDELINES

In order to avoid distortions of the illustrations and to minimize the size of the files, please:

(a) – **Use**: JPG, JPEG or PNG format to reduce the size of the images.
Please do not use: TIF, TIFF, BMP, TGA, PCX or JP2.

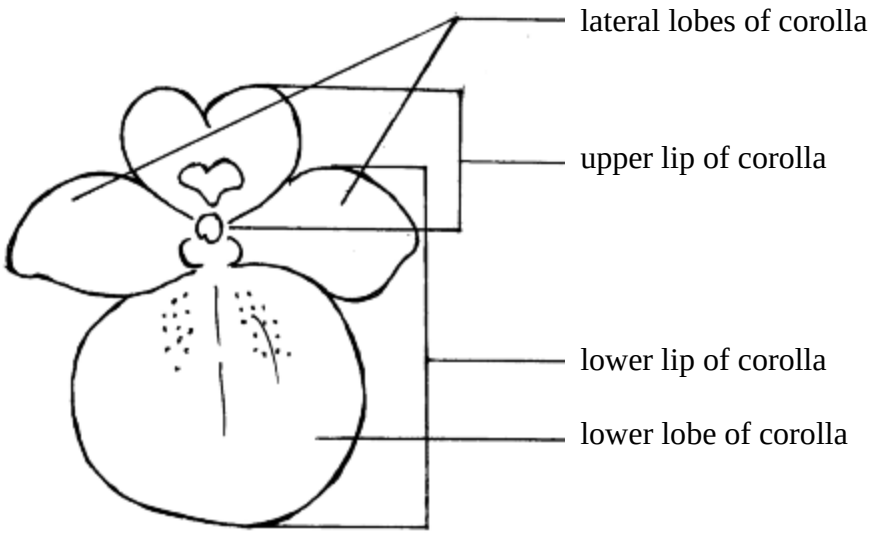
(b) – Insert the illustration for each individual state into an individual cell of a table (e.g. by using the command edit; copy and then "paste" or "paste special"). Please see Annex for further guidance.

Example

				
1	2	3	4	5
cylindrical	narrow ovate	medium ovate	broad ovate	globose

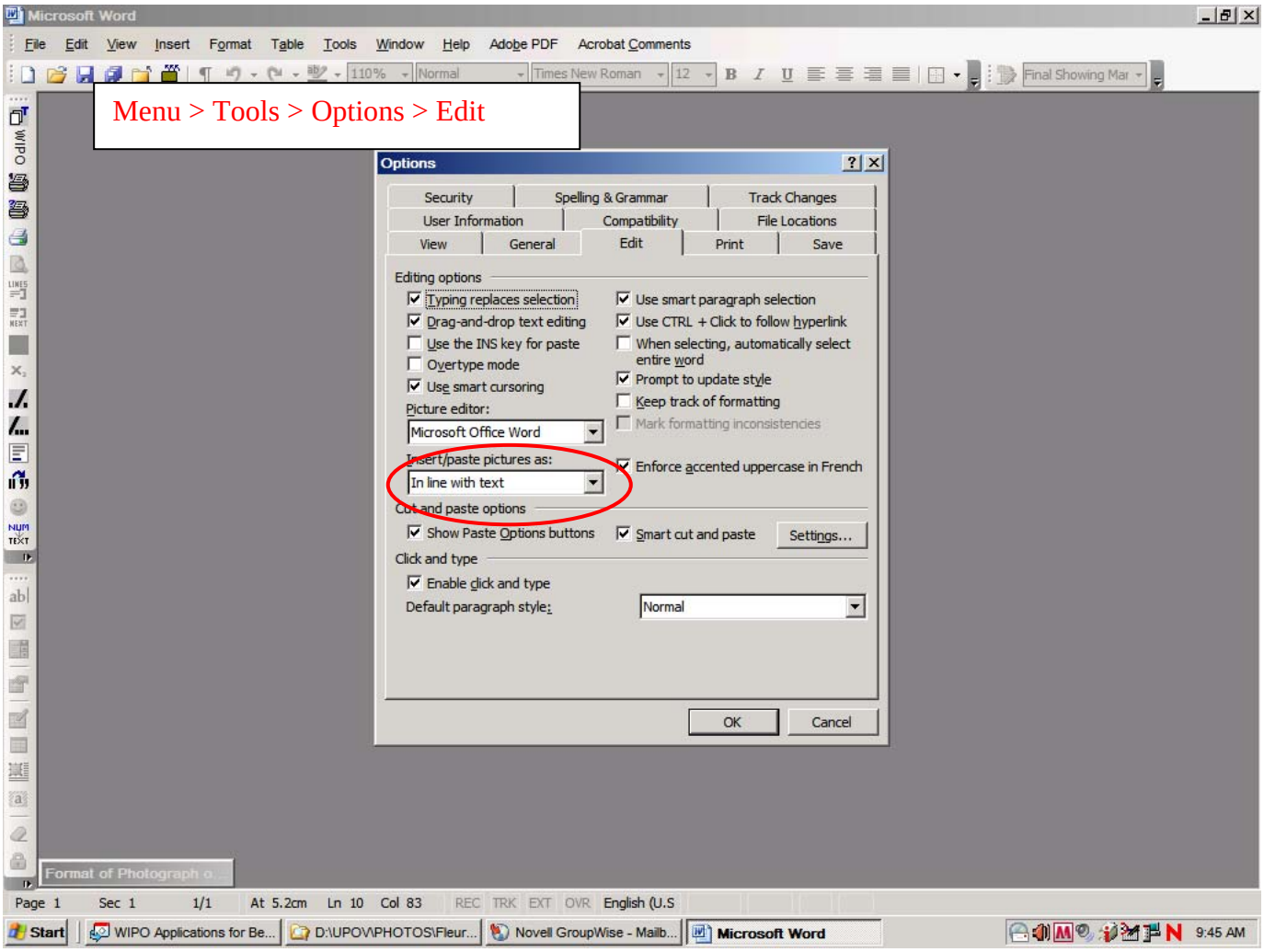
(c) – When an illustration contains several elements (e.g. drawings, arrows, figures, text, etc.) please, fix them in place, by "grouping" or by incorporating them into an image (e.g. by using the command edit; copy and inserting it using "paste special" and PNG format).

Ad. 21: Corolla: reflexing of lateral lobes
Ad. 22: Corolla: length in relation to width

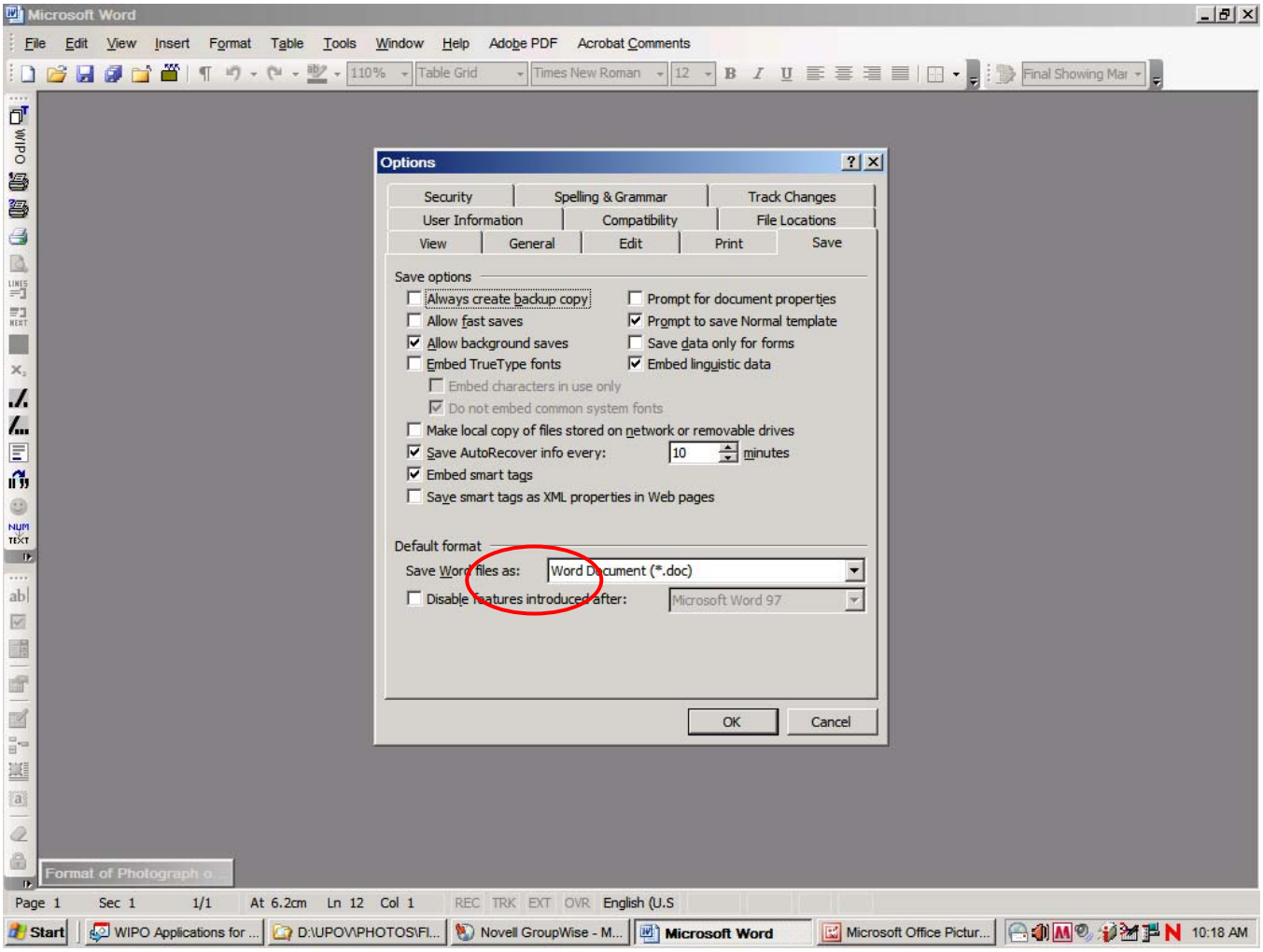


[Annex follows]

IN WORD 2003 (AND ALIKE), CHECK THAT THE FOLLOWING SETTINGS ARE ACTIVATED:



and



Once the cursor is inside the table, insert the picture (Menu > insert > picture > from file >…).

If the picture is already in a Word document, cut and paste it in the table.

In previous versions of Word (Word 6.0 1995, or Word 97), use “Paste special” and uncheck the option “floating over text” on the right hand in order to paste the picture inside the table.

[Annex IX follows]

ANNEX IX

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED
TO THE TECHNICAL COMMITTEE IN 2010

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

before October 16, 2009

Species	Basic Document	Leading expert(s)	Interested experts (countries)
Pearl Millet	TG/PRL_MIL (proj.6)	Mr. Luís Gustavo Asp Pacheco (BR)	AR, AT, ES, KE, MX, RU, UA, ZA, ISF, Office
Sweet potato (*Ipomoea batatas* (L.) Lam.)	TG/SWEETPOT (proj.4)	Mr. Keun-Jin Choi (KR)	AU, CA, CN, NZ, JP, KE, ZA, ISF, Office

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/39
(* indicates possible final draft Test Guidelines)

New draft to be submitted to the Office of the Union
before April 9, 2010

**(Guideline date for Subgroup draft to be circulated by Leading Expert: February 12, 2010
Guideline date for comments to Leading Expert by Subgroup: March 12, 2010)**

Species	Basic Document	Leading expert(s)	Interested experts (countries)
*Buckwheat (*Fagopyrum esculentum* Moench)	TG/FAGOP (proj.3)	Mr. Masashi Noto (JP)	AT, CN, CZ, DE, FR, KR, PL, QZ, RU, UA, ESA, ISF, Office
Cassava (*Manihot esculenta* Crantz.)	TG/CASSAV (proj.1)	Mr. Evans Sikinyi (KE)	TWV, BR, CO, ISF, Office
Common Vetch (*Vicia sativa* L.) (Revision)	TG/32/7(proj.1)	Mr. Luis Salaices (ES)	AR, AU, CZ, FR, PL, QZ, UA, ZA, ISF, Office
Durum wheat (Revision) (*Triticum durum* Desf.)	TG/120/4(proj.1)	Mr. Tanvir Hossain (AU) / Mr. Luis Salaices (ES)	AR, AT, (AZ), BG, BR, CA, CN, CZ, DE, ES, FR, (HR), HU, (IL), JP, MX, NZ, PL, (PT), QZ, RO, (RU), SK, UA, ZA, ESA, ISF, Office
*Flax, Linseed (Revision) (*Linum usitatissimum* L.)	TG/57/7(proj.3)	Ms. Laetitia Denecheau (FR)	AT, AU, BG, BE, CA, CN, CZ, DE, GB, HU, JP, NL, NZ, PL, QZ, RO, (RU), SK, UA, ESA, ISF, Office
*Foxtail millet (*Setaria italica* (L.) P. Beauv.)	TG/SETARIA (proj.3 Rev.)	Mr. Xianmin Diao (CN)	AR, BR, HU, JP, KE, KR, MX, ISF, Office
Groundnut (*Arachis* L.) (Revision)	TG/93/3	Mrs. Lynette Croukamp (ZA)	AR, AU, BR, CN, JP, KE, KR, MX, ISF
*Hemp (*Cannabis sativa* L.)	TG/CAN_SAT (proj.2)	Mr. Henk Bonthuis (NL)	AU, BG, BR, CZ, DE, FR, GB, HU, NZ, PL, RO, QZ, (RU), UA, ZA, ESA, ISF, Office
Rhodes grass (*Chloris gayana* Kunth)	New	AU	AR, BR, KE, MX, NZ, ZA, ISF
*Sesame	TG/SESAME (proj.4)	Mr. Baruch Bar-Tel (IL) / Mr. Keun-Jin Choi (KR)	BG, BR, CN, JP, UA, ISF, Office
Urochloa (Brachiaria)	TG/UROCH (proj.3)	Mr. Fabrício Santana Santos (BR)	AU, CO, MX, ZA, ISF, Office

DRAFT TEST GUIDELINES TO POSSIBLY BE DISCUSSED IN FUTURE SESSIONS

Wheat (Revision)	TG/3/11 + Corr.		To decide in 2010
Triticale (Revision)	TG/121/3		To decide in 2011

[End of Annex IX and of document]