

UPOV

**TECHNICAL WORKING PARTY
FOR VEGETABLES**

Forty-third Session
Beijing, China 2009

PREPARATORY WORKSHOP

April 19, 2009

UPOV

UPOV

**The International Convention for the
Protection of New Varieties of Plants**
established in 1961

**The International Union for the Protection
of New Varieties of Plants**

**Union internationale pour la
protection des obtentions végétales**

UPOV

PROGRAM

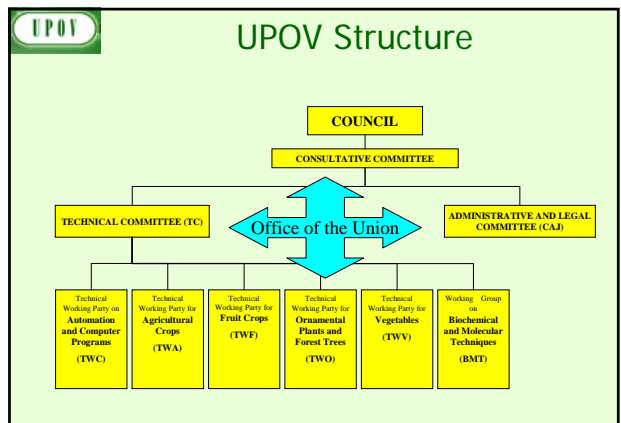
1. Introduction to UPOV
2. Introduction to the Technical Working Parties
3. Overview of the General Introduction (document TG/1/3 and TGP documents)
4. Test Guidelines (document TGP/7)
 - (a) Introduction
 - (b) Guidance on drafting characteristics
 - (c) Method of observation (M; G/S)
 - (d) Asterisked, grouping and TQ characteristics
 - (e) Example varieties
 - (f) The process for developing UPOV Test Guidelines
5. UPOV databases
6. The UPOV website
7. Agenda for the TWP meeting
8. Feedback

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- **Members of the Union**
 - States
 - Intergovernmental Organization(s)
- **Organs established by the Convention**
 - Council
 - Office of the Union
- **Other Bodies**

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1. INTRODUCTION TO UPOV

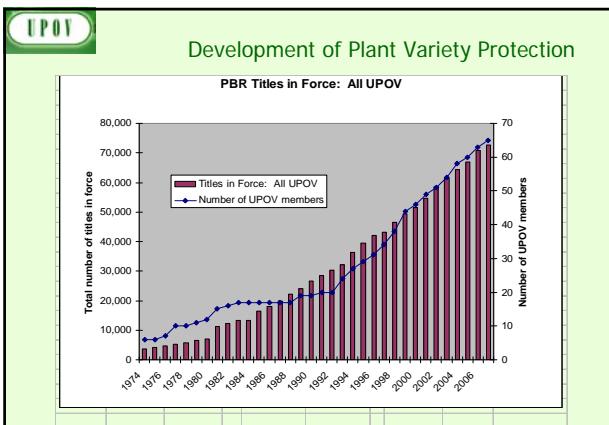
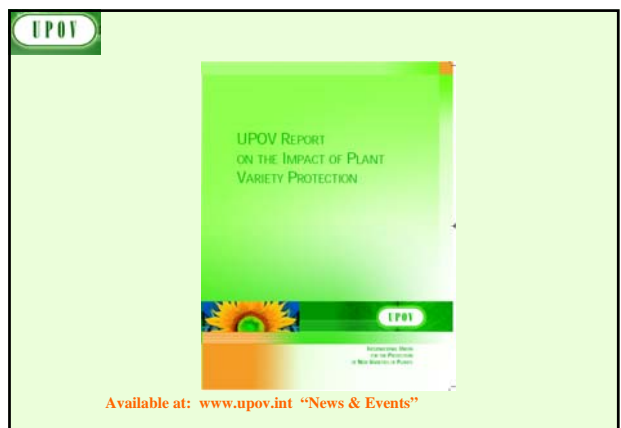
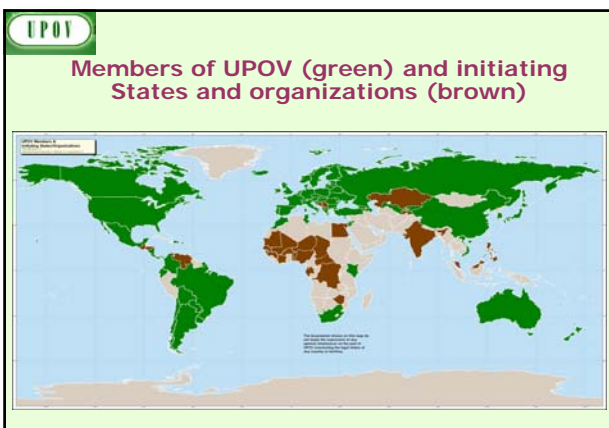




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UPOV MISSION STATEMENT

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



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2. INTRODUCTION TO THE UPOV TECHNICAL WORKING PARTIES (THE DUS EXAMINATION)

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THE CONDITIONS FOR GRANTING A BREEDER'S RIGHT

Criteria to be satisfied

- NOVELTY
- **DISTINCTNESS**
- **UNIFORMITY**
- **STABILITY**

} "DUS"

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3. OVERVIEW OF THE GENERAL INTRODUCTION

(DOCUMENT TG/1/3 AND TGP DOCUMENTS)

GUIDANCE FOR DUS EXAMINATION

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THE CONDITIONS FOR GRANTING A BREEDER'S RIGHT

Other conditions

- VARIETY DENOMINATION
- FORMALITIES
- PAYMENT OF FEES

NO OTHER CONDITIONS!

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Guidance for DUS Examination

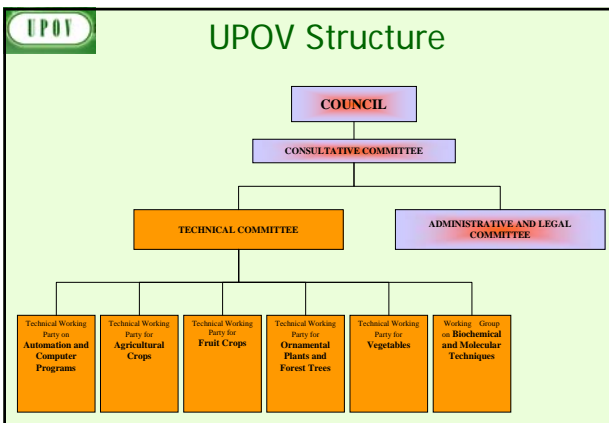
facilitates:

BEST PRACTICE (based on experience)

- => good decisions
- => good definition of the object of protection (strong protection)
- => efficiency in method of examination (learn from the best)

HARMONIZATION

- => efficiency
 - mutual acceptance of DUS reports (minimize cost of examination for individual authorities)
 - mutual recognition of variety descriptions (all parties speak the same "language")
 - simple and cheap system for applicants (minimize cost for breeders)



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UPOV provides guidance by:

- The "General Introduction" (TG/1/3)
 - General technical principles
 - Organization of DUS Testing
 - Associated "TGP" Documents (e.g. statistical methods)

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TG/1/3 General Introduction

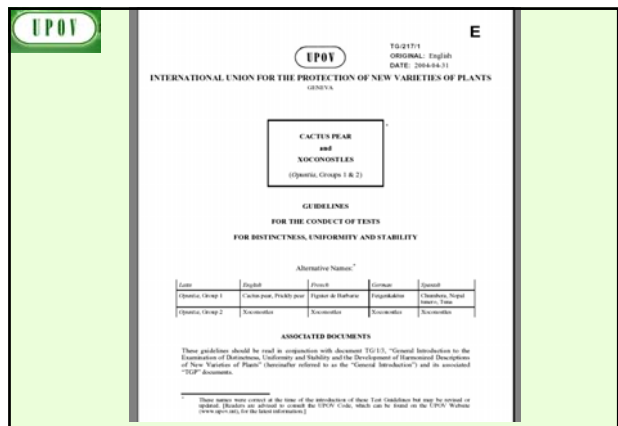
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"Associated" TGP Documents

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

- UPOV**
- UPOV provides guidance by:**
- The "General Introduction" (TG/1/3)
 - General technical principles
 - Organization of DUS Testing
 - Associated "TGP" Documents (e.g. statistical methods)
- AND
- "Test Guidelines"
 - Species/Crop-specific recommendations developed by crop experts
 - TGP/7 "Development of Test Guidelines" adopted

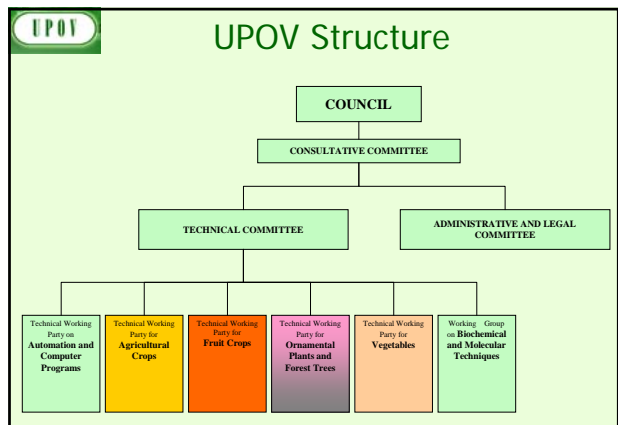
- UPOV**
- PROGRAM**
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4. TEST GUIDELINES

(a) Introduction



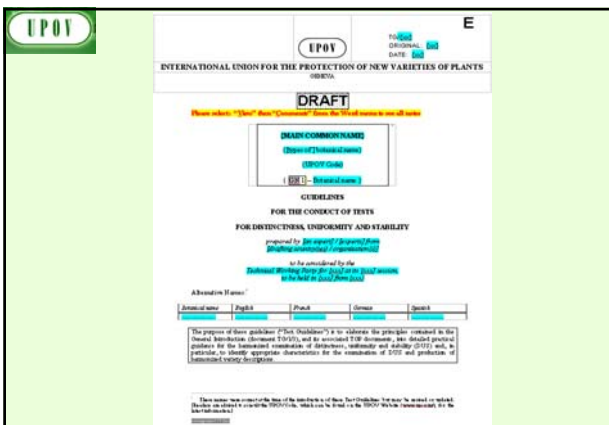
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TGP/7 “Development of Test Guidelines”

- UPOV**
- ### 10 Chapters of UPOV Test Guidelines
1. Subject of the Test Guidelines
 2. Material Required
 3. Methods of Examination
 4. Assessment of Distinctness, Uniformity and Stability
 5. Grouping of Varieties and Organization of the Growing Trial
 6. Introduction to the Table of Characteristics
 - 7. Table of Characteristics**
 8. Explanation on the Table of Characteristics
 9. Literature
 10. Technical Questionnaire

- UPOV**
1. Introduction
 2. Procedure for the Introduction and Revision of UPOV Test Guidelines
 3. Guidance for Drafting Test Guidelines
 - The **TG Template**
 - Additional Standard Wording** for the TG Template
 - Guidance Notes** for the TG Template

- UPOV**
- ### 4. TEST GUIDELINES
- (b) Guidance on drafting characteristics**
- selection of characteristics
 - types of expression (QL, QN, PQ)
 - states of expression / notes



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- ### “CHARACTERISTICS”
- may have direct commercial relevance
 - Flower color (ornamental)
 - Fruit color
 - but **commercial relevance NOT required**
 - Leaf shape

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Selection of Characteristics

The basic requirements that a characteristic should fulfill before it is used for DUS testing or producing a variety description are that its expression (TG/1/3: Section 4.2.1) :

- results from a given genotype** or combination of genotypes;
- is sufficiently **consistent and repeatable** in a **particular environment**;
- exhibits sufficient **variation between varieties** to be able to establish distinctness;
- is capable of **precise definition and recognition**;
- allows **uniformity requirements** to be fulfilled;
- allows **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.

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Selection of Characteristics

Criteria	Fruit: color	Leaf: shape	Yield
(a) results from a given genotype or combination of genotypes	Yes	Yes	Yes
(b) sufficiently consistent and repeatable in a particular environment	Yes	Yes	(No)
(c) exhibits sufficient variation between varieties to be able to establish distinctness	Yes	Yes	???
(d) is capable of precise definition and recognition	Yes	Yes	(No)
(e) allows uniformity requirements to be fulfilled	Yes	Yes	???
(f) allows stability requirements to be fulfilled	Yes	Yes	???
Commercial value	Yes	No	Yes
ACCEPTABILITY	Yes	Yes	No

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Selection of Characteristics

- Yield ???
- Straw strength ???

Etc.

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Special Characteristics: Disease Resistance


Criteria	Disease Resistance
(a) results from a given genotype or combination of genotypes	*Knowledge of nature of genetic control of resistance is important
(b) sufficiently consistent and repeatable in a particular environment	*Standardize conditions (greenhouse / laboratory) & methodology *Standardize inoculum *Ring-test
(c) exhibits sufficient variation between varieties to be able to establish distinctness	*Susceptible / Resistant OR varying degrees of resistance?
(d) is capable of precise definition and recognition	*Define and recognize races and strains
(e) allows uniformity requirements to be fulfilled	see above
(f) allows stability requirements to be fulfilled	see above
Difficult and expensive	

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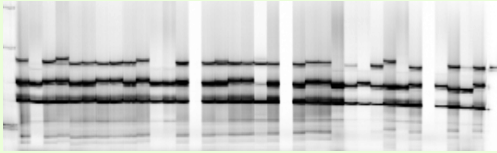
Selection of Characteristics

Criteria	Fruit: color	Leaf: shape	Yield
(a) results from a given genotype or combination of genotypes	Yes	Yes	
(b) sufficiently consistent and repeatable in a particular environment	Yes	Yes	
(c) exhibits sufficient variation between varieties to be able to establish distinctness	Yes	Yes	
(d) is capable of precise definition and recognition	Yes	Yes	
(e) allows uniformity requirements to be fulfilled	Yes	Yes	
(f) allows stability requirements to be fulfilled	Yes	Yes	
Commercial value	Yes	No	
ACCEPTABILITY	Yes	Yes	

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Molecular Techniques?



TYPE OF EXPRESSION OF CHARACTERISTICS (QL, QN, PQ):

*and consequences for consideration of **distinctness***

Qualitative characteristic

Clematis: Leaf: type



1
simple



2
ternate



3
biternate



4
triternate

7. Table of Characteristics/ Tableau des caractères/ Merkmalstabelle/ Tabla de caracteres						
Char. No.	English	français	Deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note
1. (*)	Plant: growth habit	Plante : port	Pflanze: Wuchsform	Planta: porte		
QN	upright	dressé	aufrecht	erecto	Impatiak	1
	semi-upright	semi dressé	halbhaufrucht	semierecto	DO158-1	2
	spreading	étalé	herabwiegend	aberto	Sonnen 03	3
	semi-trailing	semi-étalé	halbhängend	semirastroso	Impaf	4
	trailing	couvert	hängend	rastroso	Organza	5
2. (*)	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
QN	short	basse	niedrig	baja	Yatrye	3
	medium	moyenne	mittel	media	DO158-1	5
	tall	haute	hoch	alta	Impatiak	7

Qualitative Characteristics: **distinctness**

In qualitative characteristics, the difference between two varieties may be considered clear if one or more characteristics have expressions that fall into **two different states in the Test Guidelines**. Varieties should not be considered distinct for a qualitative characteristic if they have the same state of expression.

(e.g. sex of plant: dioecious female (1), dioecious male (2), monoecious unisexual (3), monoecious hermaphrodite (4)).

QUALITATIVE Characteristics

“Qualitative characteristics” are those that are **expressed in discontinuous states** (e.g. sex of plant: dioecious female (1), dioecious male (2), monoecious unisexual (3), monoecious hermaphrodite (4)).

These states are self-explanatory and independently meaningful. All states are necessary to describe the full range of the characteristic, and every form of expression can be described by a single state. The order of states is not important. As a rule, the **characteristics are not influenced by environment**.

QUANTITATIVE Characteristics

“Quantitative characteristics” are those where the expression covers the full range of variation from one extreme to the other.

The **expression can be recorded on a one-dimensional, continuous or discrete, linear scale**. The range of expression is divided into a number of states for the purpose of description (e.g. length of stem: very short (1), short (3), medium (5), long (7), very long (9)). The division seeks to provide, as far as is practical, an even distribution across the scale. The Test Guidelines do not specify the difference needed for distinctness. The states of expression should, however, be meaningful for DUS

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Quantitative Characteristics: distinctness

Quantitative characteristics are considered for distinctness according to the method of observation and the features of propagation of the variety concerned...

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Quantitative Characteristics: distinctness

Quantitative characteristics are considered for distinctness according to the method of observation and the features of propagation of the variety concerned.

Test Guidelines (TGP/7 proposed revised text)

Difference of **two Notes to represent a clear difference if the comparison** between two varieties is performed **at the level of Notes**:

e.g.

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Quantitative Characteristic

Clear difference
Characteristic : Plant height

Clear difference

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Quantitative Characteristics: distinctness

TG/233/1
Dianthus Dianthe, 2007-03-28
- 9 -

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
6. (*)	(a) Leaf blade length	Limbe: longueur	Blattbreite: Länge	Limbo: longitud		
QN	short	courte	kurz	corto	Codina, Strawberry Sandae	3
	medium	moyenne	mittel	medio	Codacee	5
	long	longue	lang	largo	Babbelstapa, Babbelstalat	7

1 to 9 scale: Notes 1 and 3, Notes 2 and 4, Notes 3 and 5 etc. represent a clear difference

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Quantitative Characteristic

Clear difference
Characteristic : Plant height

May not be a clear difference

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Quantitative Characteristics: distinctness

TG/233/1
Dianthus Dianthe, 2007-03-28
- 9 -

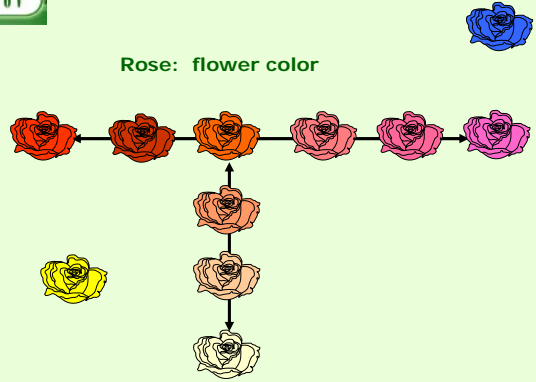
	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
5.	Stem: anthocyanin coloration below inflorescence	Tige: pigmentation anthocyanique sous inflorescence	Trieb: Anthocyanfärbung unter dem Blütenstand	Tallo: pigmentación antocianina por debajo de la inflorescencia		
QN	absent or weak	absente ou faible	fehlernd oder gering	ausente o débil	Hecliam	1
	medium	moyenne	mittel	media	Hecliam	2
	strong	forte	stark	fuerte		3

1 to 3 scale: only Notes 1 and 3 represent a clear difference

PSEUDO-QUALITATIVE Characteristics

In the case of “pseudo-qualitative characteristics,” the **range of expression is at least partly continuous, but varies in more than one dimension** (e.g. shape: ovate (1), elliptic (2), circular (3), obovate (4)) and cannot be adequately described by just defining two ends of a linear range. In a similar way to qualitative (discontinuous) characteristics – hence the term “pseudo-qualitative” – each individual state of expression needs to be identified to adequately describe the range of the characteristic.

Rose: flower color



Example



Pseudo-Qualitative Characteristics: distinctness

A different state in the Test Guidelines may not be sufficient to establish distinctness (see also section 5.5.2.3). However, in certain circumstances, varieties described by the same state of expression may be clearly distinguishable.

		← broadest part →		
		(below middle)	at middle	(above middle)
width (ratio length/wid) →	narrow (filiform)		3 linear	
			4 oblong	7 oblanccolate
broad (compress)		1 triangular	2 ovate	5 elliptic
			8 obovate	10 obtriangular
			6 circular	

		← broadest part →		
		(below middle)	at middle	(above middle)
width (ratio length/wid) →	narrow (filiform)		3 linear	
			4 oblong	7 oblanccolate
broad (compress)		1 triangular	2 ovate	5 elliptic
			8 obovate	10 obtriangular
			6 circular	

EPO1

STATES / NOTES for QL, QN ,PQ

EPO1




Quantitative Characteristics

weak/strong
short/long
small/large

Note	State	Note	State
1	very weak (or: absent or very weak)	1	very small (or: absent or very small)
2	very weak to weak	2	very small to small
3	weak	3	small
4	weak to medium	4	small to medium
5	medium	5	medium
6	medium to strong	6	medium to large
7	strong	7	large
8	strong to very strong	8	large to very large
9	very strong	9	very large

EPO1

Qualitative Characteristics
(typical example)

English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
19. VG (* (*)	Inflorescence: type				
QL	Type 1				1
	Type 2				2
	Type 3				3
	1 Type 1	2 Type 2	3 Type 3		

EPO1

Quantitative Characteristics

Standard Range Version 1	Standard Range Version 2	Standard Range Version 3	Standard Range Version 4
1 very weak (or: absent or very weak)	1 very weak (or: absent or very weak)	-	-
3 weak	3 weak	3 weak	3 weak
5 medium	5 medium	5 medium	5 medium
7 strong	7 strong	7 strong	7 strong
9 very strong	-	9 very strong	-

EPO1

Qualitative Characteristics
(special cases)

Char No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
1. MS (* C	Plant: ploidy						
QL		diploid					2
		tetraploid					4
3. VG (* C	Stem: anthocyanin coloration						
QL		absent				Gumpoong	1
		present				Chungoong, Gopoong	9

EPO1

Quantitative Characteristics

State	Example 1	Example 2	Example 3	Example 4
	Size relative to:	Angle:	Position:	Length in relation to:
1	much smaller	very acute	at base	equal
3	moderately smaller	moderately acute	one quarter from base	slightly shorter
5	same size	right angle	in middle	moderately shorter
7	moderately larger	moderately obtuse	one quarter from apex end	much shorter
9	much larger	very obtuse	at apex	very much shorter

UPO1

Quantitative Characteristics

Limited range

State	Example 1 Stem: attitude
1	erect
3	semi-erect
5	prostrate

Condensed range

Example 1	Example 2
1 e.g. absent or very weak <i>(absent or very weakly expressed)</i>	1 e.g. absent or weak <i>(absent or weakly expressed)</i>
2 weak <i>(weakly expressed)</i>	2 moderate (or medium) <i>(moderately expressed)</i>
3 strong <i>(strongly expressed)</i>	3 strong <i>(strongly expressed)</i>

UPO1

QL, QN or PQ?

```

    graph TD
      A{Expressed in DISCONTINUOUS STATES} -- YES --> B(QL)
      A -- NO --> C[absent / present mono- / di- male / female]
  
```

UPO1

Pseudo-qualitative Characteristics (typical examples)

24. Flower: color of the centre (+)	Fleur: couleur du centre	Farbe der Mitte	Fior: color del centro	
PQ green	vert	grün	verde	1
yellow	jaune	gelb	amarillo	2
orange	orange	orange	naranja	3
pink	rose	rosa	rosa	4
red	rouge	rot	rojo	5
purple	pourpre	purpura	plápusa	6

UPO1

QL, QN or PQ?

```

    graph TD
      A{Expressed in DISCONTINUOUS STATES} -- YES --> B(QL)
      A -- NO --> C{varies in ONLY ONE DIMENSION}
      C -- YES --> D(QN)
      C -- NO --> E[short => tall weak => strong erect => prostrate color: intensity (not hue)]
  
```

UPO1

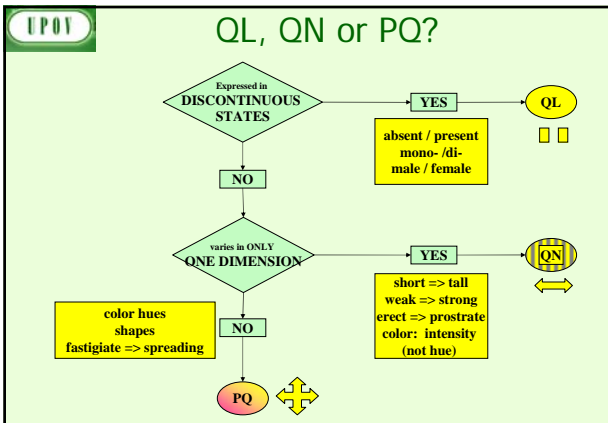
Opuntia: Shape of Cladode

UPO1

QL, QN or PQ?

```

    graph TD
      A{Expressed in DISCONTINUOUS STATES} -- YES --> B(QL)
      A -- NO --> C{varies in ONLY ONE DIMENSION}
      C -- YES --> D(QN)
      C -- NO --> E[color hues shapes fastigate => spreading]
      E --> F(PQ)
  
```



UPOY

	Note/ Nota
1. Plant: ploidy	
diploid	2
tetraploid	4
hexaploid	6
octoploid	8

UPOY

EXERCISE

UPOY

2. Leaf sheath: anthocyanin coloration	
absent or very weak	1
weak	3
medium	5
strong	7
very strong	9

UPOY

(a) What type of Expression?

QL: Qualitative
QN: Quantitative
PQ: Pseudo-qualitative

(b) Which Notes represent a clear difference?

UPOY

3. Plant: rhizomes	
absent	1
present	9

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4. Petal: color

white	1
yellow	2
orange	3
red	4
pink	5
purple	6

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7. Petal: color

RHS Colour Chart
(indicate reference number)

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5. Leaf blade: intensity of green color of upper side

light	3
medium	5
dark	7

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8. Leaf blade: profile in cross section

straight or weakly concave	1
moderately concave	2
strongly concave	3

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6. Leaf blade: shape of base

rounded	1
truncate	2
cordate	3



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4. TEST GUIDELINES (document TGP/7)

(c) Method of observation (visual / measurement; single record / several records)

UPOV Method of Observation

M: Measurement:
 an objective **observation against a calibrated, linear scale** e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.);

V: Visual observation:
 includes observations where the expert uses **reference points** (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts).

“Visual” observation refers to the sensory observations of the expert and, therefore, also **includes smell, taste and touch**.

UPOV Records for a number of single, individual plants or parts of plants (S)

Section 4.3.3.1
 Example (MS): Leaflet: length (pea: self-pollinated)

Section 4.3.3.2
 Example (MS): Plant: natural height (ryegrass: cross-pollinated)

Diagram illustrating measurement of leaflet length (MS) and plant natural height (MS) for individual plants (i, ii, iii, iv, ..., n) and the calculation of mean and variety mean.

UPOV Type of Record
 (for the purposes of distinctness)

G: single record for a variety, or a **GROUP of plants** or parts of plants;

In most cases, “G” provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

S: records for a number of **SINGLE**, individual **plants** or parts of plants ...

UPOV EXERCISE

MG ?
MS ?
VG ?
VS ?

UPOV Single record for a group of plants or parts of plants (G)

Section 4.3.2.3 Example (VG): Flower: type (tulip: vegetatively propagated)
 Section 4.3.2.3 Example (VG): Lowest leaf: hairiness of leaf sheaths (barley: self-pollinated)
 Section 4.3.2.3 Example (MG): Plant: height (wheat: self-pollinated)
 Section 4.3.2.4 Example: (statistical analysis)

Diagram illustrating single variety records and statistical analysis for different plant characteristics.

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1.	Plant: height (at time of harvest)	
QN	very short	1
	short	3
	medium	5
	tall	7
	very tall	9

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2.	Leaf: twisting of tip	
QN	absent or very weak	1
	weak	3
	medium	5
	strong	7
	very strong	9

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5.	Leaf: width of blade	
QN	very narrow	1
	narrow	3
	medium	5
	wide	7
	very wide	9

UPOY

3.	Leaf: undulation of margin of blade	
QN	absent or very weak	1
	intermediate	2
	strong	3

UPOY

6.	Plant: time of inflorescence emergence (without vernalization)	
QN	very early	1
	early	3
	medium	5
	late	7
	very late	9

UPOY

4.	Tassel: number of primary lateral branches	
QN	absent or very few	1
	few	3
	medium	5
	many	7
	very many	9

UPOY

7.	Plant: vegetative growth habit (without vernalization)	
QN	erect	1
	semi-erect	3
	medium	5
	semi-prostrate	7
	prostrate	9

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4. TEST GUIDELINES (document TGP/7)

(d) Asterisked, grouping and TQ characteristics (functional categories)

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Asterisked Characteristic

Function	Criteria
1.Characteristics that are important for the international harmonization of variety descriptions.	1.Must be a characteristic included in the Test Guidelines. 2. Should always be examined for DUS and included in the variety description by all members of the Union EXCEPT when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate. 3.Must be useful for function 1. 4.Particular care should be taken before selection of disease resistance characteristics.

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Standard Test Guidelines Characteristic

Function	Criteria
1.Characteristics that are accepted by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.	1.Must satisfy the criteria for use of any characteristic for DUS as set out in Chapter 4, section 4.2. 2.Must have been used to develop a variety description by at least one member of the Union. 3.Where there is a long list of such characteristics and, where considered appropriate, there may be an indication of the extent of use of each characteristic.

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Grouping Characteristic

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Plant: growth habit (characteristic 1)
- (b) Leaf blade: variegation (characteristic 11)
- (c) Upper lobes of corolla: main color (characteristic 24), with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: orange
 - Gr. 4: pink
 - Gr. 5: red
 - Gr. 6: red purple
 - Gr. 7: violet
 - Gr. 8: blue

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Asterisked Characteristic

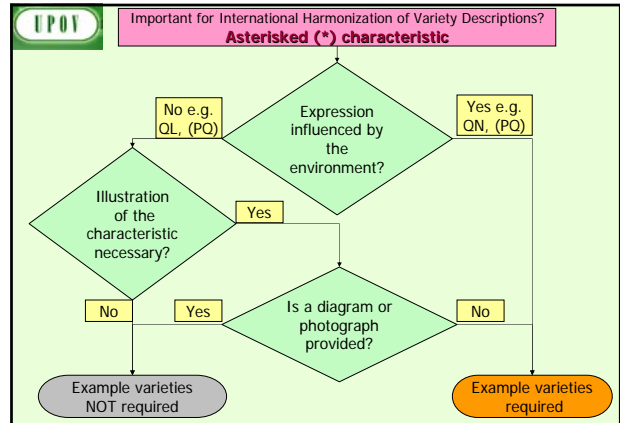
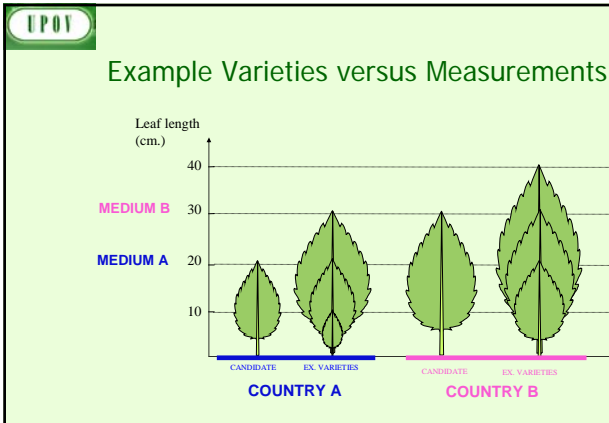
7. Table of Characteristics/ Tableau des caractères/ Merkmalstabelle/ Tabla de caracteres

Char. No.	English	français	Deutsch	español	Example Varieties Ejemplos Beispielsorten Variedades ejemplo	Note/ Nota
	Plant: growth habit	Plante : port	Pflanze: Wuchsform	Planta: porte		
Q9	upright	dressé	aufrecht	erecto	Impatiak	1
	semi-upright	semi dressé	halbaufrrecht	semierecto	D0158-1	2
	spreading	étalé	breitwüchsig	abierto	Suzanna 03	3
	semi-trailing	semi-étalé	halbhängend	semirastroso	Impusaf	4
	trailing	couvent	hängend	rastroso	Organza	5

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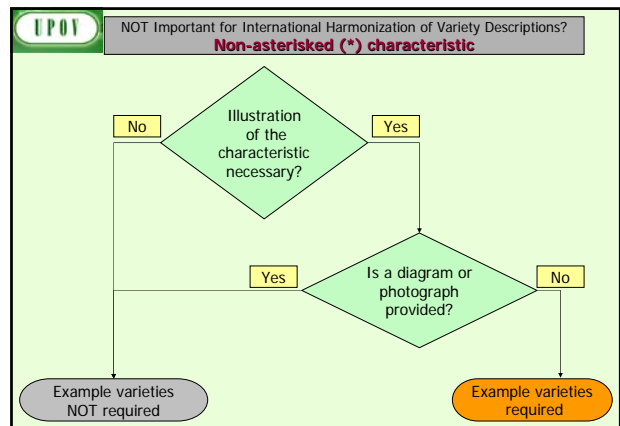
Grouping Characteristic

Function	Criteria
characteristics in which the documented states of expression, even where recorded at different locations, can be used either individually or in combination with other such characteristics: 1. to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness, and/or 2. to organize the growing trial so that similar varieties are grouped together	1.(a) Qualitative characteristics or (b) Quantitative or pseudo-qualitative characteristics which provide useful discrimination between the varieties of common knowledge from documented states of expression recorded at different locations. 2.Must be useful for functions 1 and 2. 3.Should be an asterisked characteristic and/or included in the Technical Questionnaire or application form.



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Example Varieties –the need



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Example Varieties – the need

NEED { in characteristics used to **harmonize descriptions**

and

which are **influenced by the environment**

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Example Varieties - availability

widely and freely available { National Authority

DUS examiners

Breeders

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Example Varieties within the collection

must show the range of expression in the collection

QN { 3 : short
5 : medium
7 : long

PQ: { cover the whole range

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Example Varieties - agreement

Proposed by the **Leading Expert** of the TG
(in cooperation with interested experts)

Accepted if **no objections** are presented

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Example Varieties Fluctuation

Maintain the expression for the characteristic in relation to the other varieties in the collection

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Example Varieties - multiple sets

Regional Sets
Different types

clear criteria for creating the sets !

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Example Varieties number

All desired characteristics covered with the **minimum** number of example varieties

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4. TEST GUIDELINES (document TGP/7)

(f) The process for developing UPOV Test Guidelines

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Test Guidelines

- **257 Test Guidelines** adopted


but...

- **>2,500 genera and species** with varieties examined for PBR

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GENIE Database

(**Genus / species**)




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5. UPOV DATABASES

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GENIE Database



Variety denomination related information
Protection offered by UPOV members

DUS information


- UPOV Test Guidelines
- practical experience of UPOV (document TC/44/4)
- cooperation in DUS examination (document C/41/5)

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Article 20 of the 1991 Act
(Variety denominations)

(2) [*Characteristics of the **denomination***]

In particular, it **must be different from every denomination** which designates, in the territory of any Contracting Party, **an existing variety** of the same plant species or of a closely related species.



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PRIORITY for UPOV Test Guidelines

PRIORITY for species or crops with high:

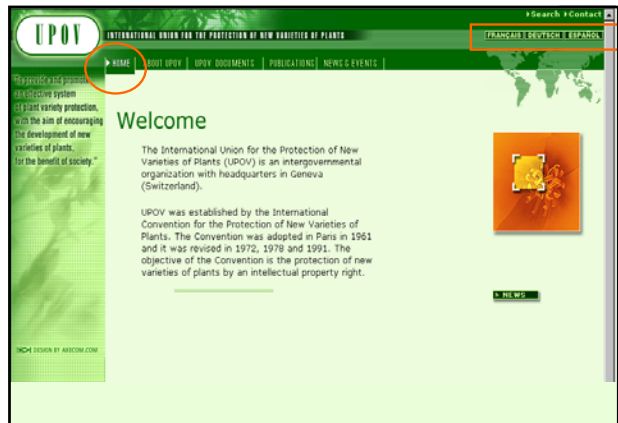
- number of **authorities** receiving PBR applications;
- number of **PBR applications**;
- number of **foreign applications** received by UPOV members;
- **economic importance**;
- level of **breeding activity**

UPOV **EXAMPLE (New Test Guidelines)**

Test Guidelines: *Plantus magnifica L.*
(Common name: **Alpha**)

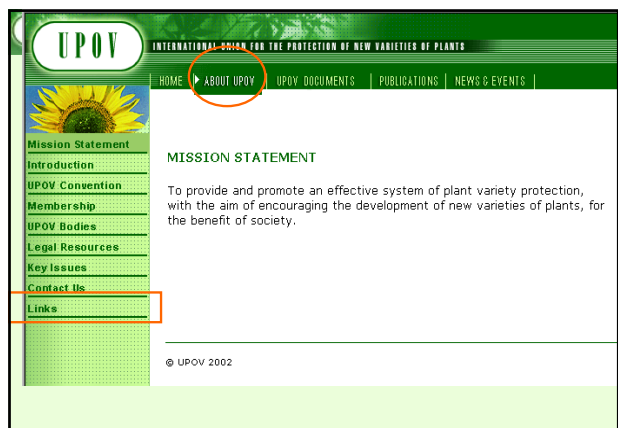
Technical Working Party: **TWX**

TWX (2005):	Alpha (proj. 1)
TWX (2006):	Alpha (proj. 2)
TWX (2007):	Alpha (proj. 3)
Enlarged Editorial Committee (2008):	Alpha (proj. 4)
Technical Committee (2008):	Alpha (proj. 5)
Final adopted document (2008):	TG/500/1



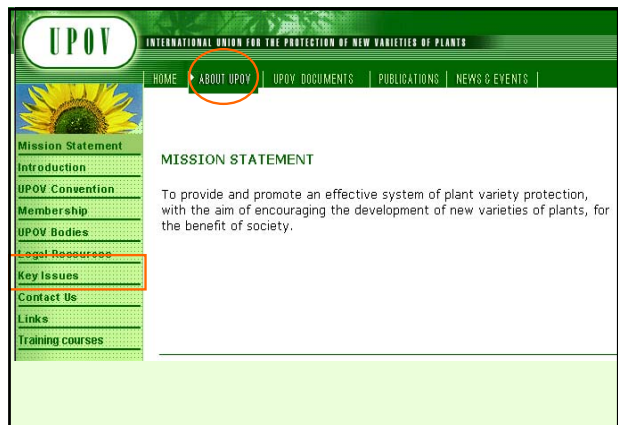
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6. THE UPOV WEBSITE



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UPOV Website
<http://www.upov.int>
 (e-mail: upov.mail@upov.int)



**7. AGENDA
for the
TWP Session**

8. FEEDBACK

THANK YOU