

**UPOV**

**TECHNICAL WORKING PARTY  
FOR ORNAMENTAL PLANTS AND FOREST TREES**

Forty-first Session  
Wageningen, Netherlands, June 9 to 13, 2008

**PREPARATORY WORKSHOP**

June 8, 2008

**UPOV**

**PROGRAM**

- 1./2. Introduction to UPOV and the Technical Working Parties
3. National arrangements and cooperation with breeders in preparing test guidelines
4. Overview of the General Introduction (document TG/1/3 and TGP documents)
5. Test Guidelines (document TGP/7)
  - (a) Introduction
  - (b) Guidance on drafting Characteristics
  - (c) Method of observation (V/M; G/S)
  - (d) Asterisked, grouping and TO characteristics
  - (e) Example varieties
  - (f) The process for developing UPOV Test Guidelines
6. The UPOV website
7. Agenda for the TWP meeting

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**1. INTRODUCTION TO UPOV**

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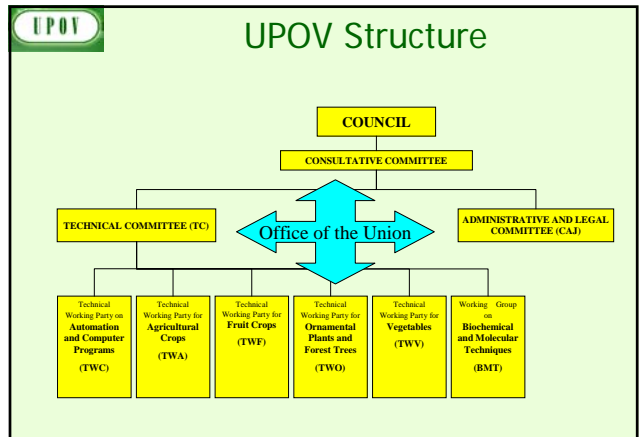
**The International Convention for the Protection of New Varieties of Plants**  
established in 1961

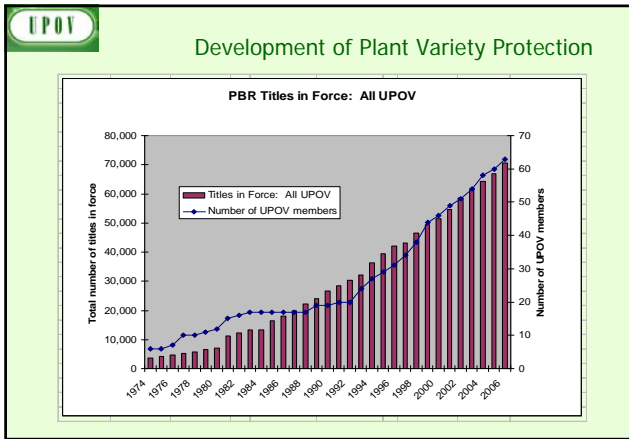
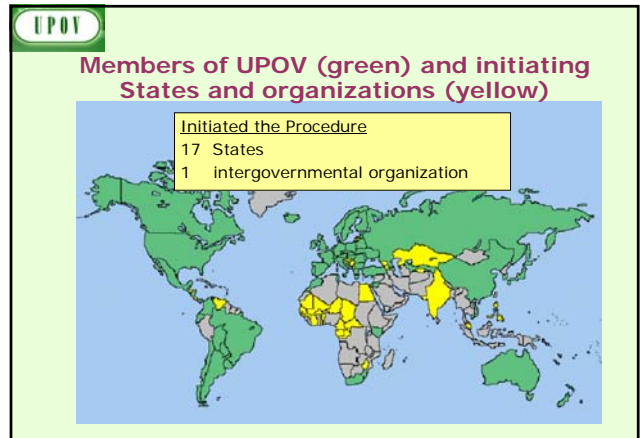
**The International Union for the Protection of New Varieties of Plants**

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

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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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### 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"**

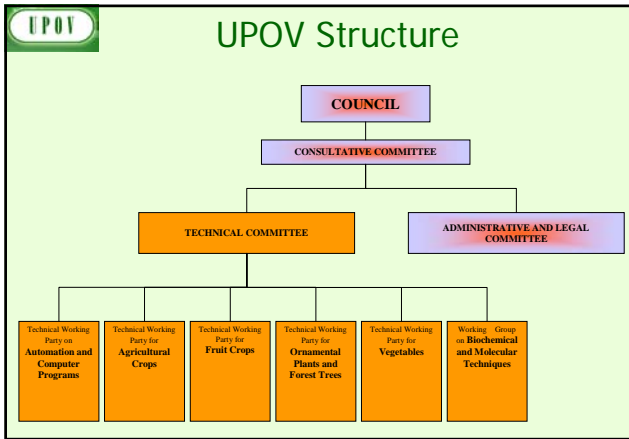
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## THE CONDITIONS FOR GRANTING A BREEDER'S RIGHT

*Other conditions*

- VARIETY DENOMINATION
- FORMALITIES
- PAYMENT OF FEES

**NO OTHER CONDITIONS!**



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## 3. NATIONAL ARRANGEMENTS AND COOPERATION WITH BREEDERS IN PREPARING TEST GUIDELINES

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## 4. OVERVIEW OF THE GENERAL INTRODUCTION

**(DOCUMENT TG/1/3 AND TGP DOCUMENTS)**

**GUIDANCE FOR DUS EXAMINATION**

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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)

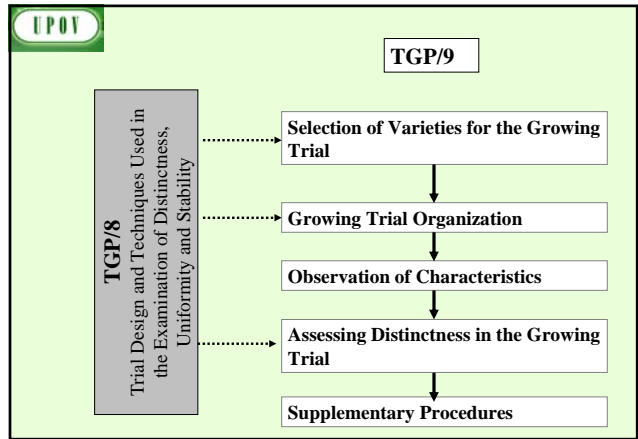
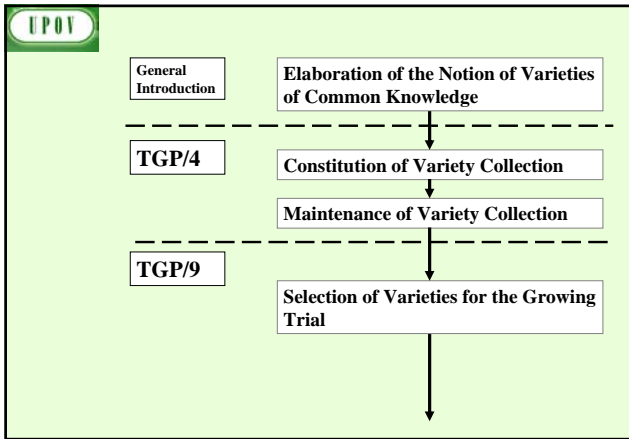
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TG/1/3 General Introduction

↓

"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



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**PROGRAM**

1. Introduction to UPOV
2. Introduction to the UPOV 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 (V/M; G/S)
  - (d) Asterisked, grouping and TQ characteristics
  - (e) Example varieties
  - (f) The process for developing UPOV Test Guidelines
5. The UPOV website
6. Agenda for the TWP meeting

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## 5. TEST GUIDELINES

### (a) Introduction

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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)

AND

- **“Test Guidelines”**
  - **Species/Crop-specific recommendations developed by crop experts**
  - **TGP/7 “Development of Test Guidelines” adopted**

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 TG/2/1/1 ORIGINAL: English  
 DATE: 2004-04-31  
**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
 (UPOV)

**CACTUS PEAR**  
**AND**  
**XOCONOSTLES**  
 (Opuntia, Groups 1 & 2)

**GUIDELINES**  
**FOR THE CONDUCT OF TESTS**  
**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

Alternative Names:

Latin	English	French	German	Spanish
Opuntia, Group 1	Cactus pear, Prickly pear	Figuera de Barbarie	Fengelsdistel	Chumbera, Nopal toro, Tuna
Opuntia, Group 2	Xucumanillo	Xucumanillo	Xucumanillo	Xucumanillo

ASSOCIATED DOCUMENTS

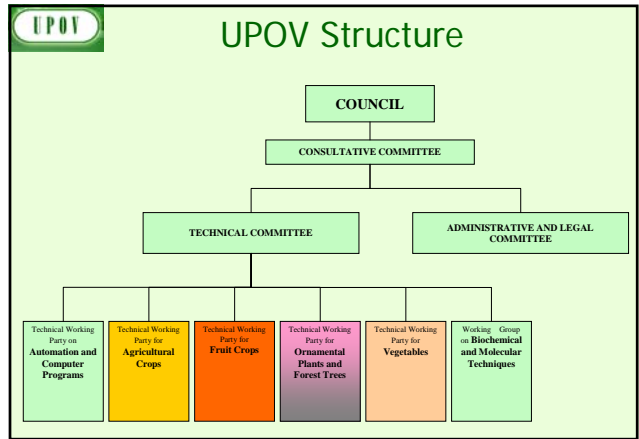
These guidelines should be read in conjunction with document TG/1/3, “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants” (hereinafter referred to as the “General Introduction”) and its associated “TGP” documents.

These names have control at the time of the introduction of these Test Guidelines but may be revised or updated. Members are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.

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**Test Guidelines**

- **249 Test Guidelines** adopted
- Further **62 to be discussed** in 2008 (19 revisions / 43 new Test Guidelines)



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**TGP/7**  
**“Development of Test Guidelines”**

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- 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

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## 1. Introduction

Purpose of document TGP/7:

- to provide guidance on the development of **UPOV TEST GUIDELINES**
- to provide guidance on the development of **INDIVIDUAL AUTHORITIES' TEST GUIDELINES** in the absence of UPOV Test Guidelines

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## The TG Template

(Annex I of document TGP/7)

- Format of the cover page,
- Universal Standard wording of 10 Chapters,
- Format of the Table of Characteristic (Chapter 7),
- Format of the Technical Questionnaire (Chapter 10)

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS (UPOV)

**DRAFT**

MEAN COMMON NAME  
 (Type of Table of name)  
 (PIL) - Reference

GUIDELINES  
 FOR THE CONDUCT OF TESTS  
 FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by the expert group (working group) on Planting material (working group)

to be considered by the  
 International Working Group for UPOV/7 on 2007 session  
 (to be held in Bonn, Germany)

Language	English	French	German	Spanish
Alternative names				

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the International Convention for the Protection of New Varieties of Plants (UPOV 1991), and to recommend UPOV documents and standard practical guidelines for the international examination of distinctness, uniformity and stability (DUS) with a particular view to identify appropriate characteristics for the examination of DUS and production of international variety descriptions.

**UPOV** INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

HOME | ABOUT UPOV | UPOV DOCUMENTS | PUBLICATIONS | NEWS

**DRAFTER'S KIT FOR TEST GUIDELINES**

Calendar  
 Council  
 Restricted area

- [General Introduction to DUS](#)
- [Test Guidelines in Word format](#)
- [TGP/7 "Development of Test Guidelines"](#)
- [Electronic TG Template](#)

TGP/7 Annex 4:

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

Additional Characteristics

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## 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** Format of the Table of Characteristic

Char. No. (*) (+) (QL-QN/PQ)	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Varietades ejemplo	Note/ Nota
<b>EN 18</b> Order of characteristics in the Table of Characteristic(s)	<b>GN 24</b> Heading of a characteristic)	<b>GN 24</b> Heading of a characteristic)	<b>GN 24</b> Heading of a characteristic)	<b>GN 24</b> Heading of a characteristic)		
<b>EN 19</b> Asterisked characteristics)	<b>GN 22</b> Recommendation for conducting the examination)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 18</b> Example varieties)	<b>GN 24</b> Notes)
<b>EN 20</b> Explanation of the characteristic)	<b>GN 23</b> (Growth stage)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 18</b> Example varieties)	<b>GN 24</b> Notes)
<b>EN 21</b> Type of expression of the characteristic)	(Other)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 24</b> States of expression of a characteristic)	<b>GN 18</b> Example varieties)	<b>GN 24</b> Notes)

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## 5. 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

- Yield ???
- Straw strength ???

Etc.

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## Selection of Characteristics

Criteria	Fruit: color	Leaf: shape	Yield	Straw strength
(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		
<b>ACCEPTABILITY</b>	Yes	Yes		

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## Selection of Characteristics

Criteria	Fruit: color	Leaf: shape	Yield	Straw strength
(a) results from a given genotype or combination of genotypes	Yes	Yes	Yes	Yes
(b) sufficiently consistent and repeatable in a particular environment	Yes	Yes	(No)	(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	Yes
<b>ACCEPTABILITY</b>	Yes	Yes	No	No

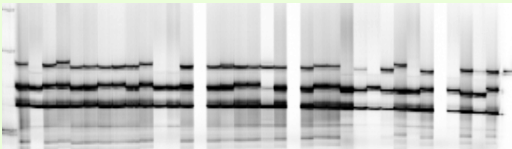
**UPOV** Special Characteristics: Disease Resistance

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
<b>Difficult and expensive</b>	

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## Molecular Techniques?



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

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### 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**.

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### Clematis: Leaf: type




1  
simple



2  
ternate



3  
biternate



4  
triternate

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### Qualitative Characteristics

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)).



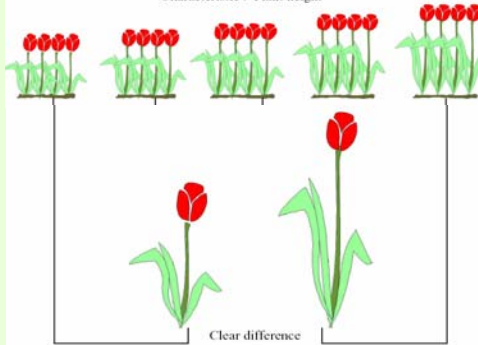
### Quantitative Characteristics

“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 assessment.

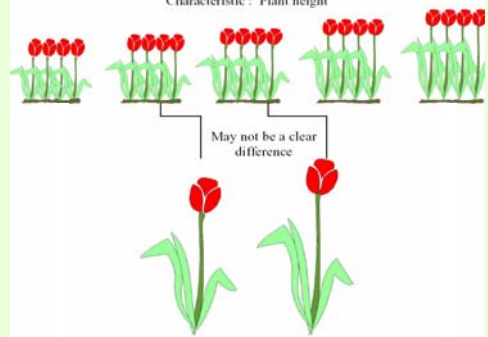
### Quantitative Characteristics

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

Clear difference  
Characteristic: Plant height



Clear difference  
Characteristic: Plant height



### 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.




### Example





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### Qualitative Characteristics (typical example)

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

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### Qualitative Characteristics (special cases)

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

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### 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

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### 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	-

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### Quantitative Characteristics

State	Example 1	Example 2	Example 3	Example 4
	<b>Size relative to:</b>	<b>Angle:</b>	<b>Position:</b>	<b>Length in relation to:</b>
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

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### Quantitative Characteristics

**Limited range**

State	Example 1
	<b>Stem: attitude</b>
1	erect
3	semi-erect
5	prostrate

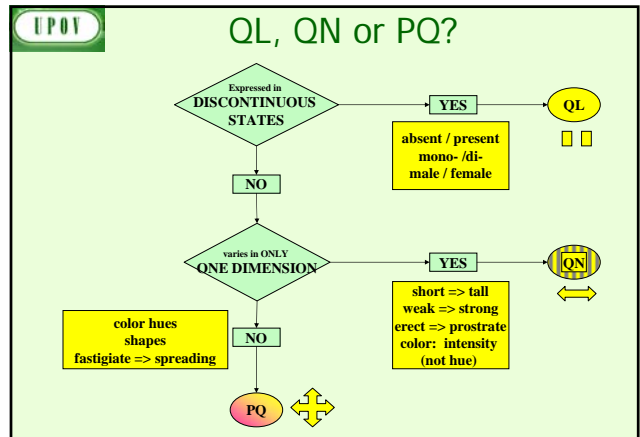
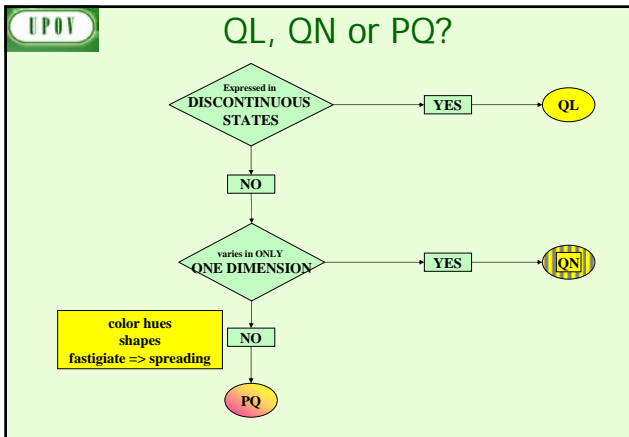
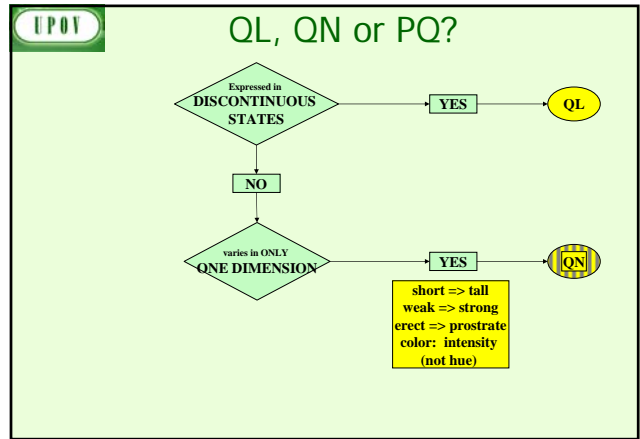
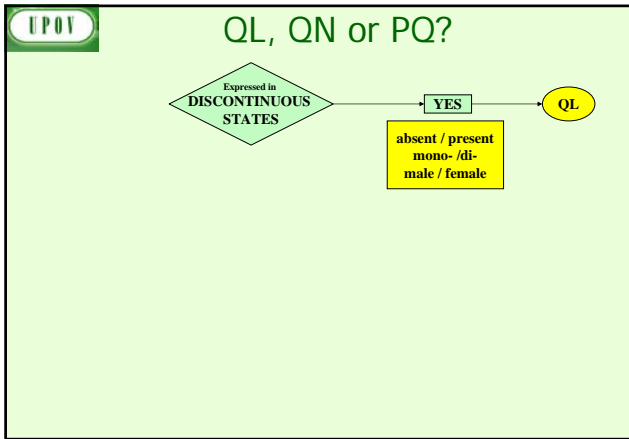
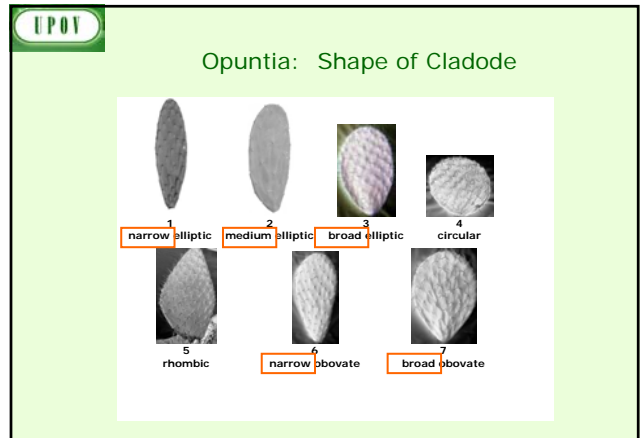
**Condensed range**

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

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### Pseudo-qualitative Characteristics (typical examples)

24. Flower: color of the center (+)	Fleur: couleur du centre	Farbe der Mitte	Flor: 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	purpurn	purpura	6



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## EXERCISE

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## Types of Expression

**QL: Qualitative**

**QN: Quantitative**

**PQ: Pseudo-qualitative**

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

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

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<b>3. Plant: rhizomes</b>	
absent	1
present	9

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<b>4. Plant: growth habit</b>	
erect	1
semi erect	3
medium	5
semi prostrate	7
prostrate	9

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**5. Leaf blade: ratio length/width**

very small	1
small	3
medium	5
large	7
very large	9

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**6. Petal: color**

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

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**7. Leaf blade: intensity of green color of upper side**

light	3
medium	5
dark	7

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**8. Leaf blade: shape of base**

acute	1
obtuse	2
truncate	3
cordate	4

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**9. Petal: color**

RHS Colour Chart  
(indicate reference number)

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**10. Leaf blade: profile in cross section**

straight or weakly concave	1
moderately concave	2
strongly concave	3

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**11. Flower: position of stigma relative to anthers**

below	1
same level	2
above	3

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**12. Petal: shape (excluding claw)**

broad elliptic	1
circular	2
oblate	3

---

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**5. 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.);

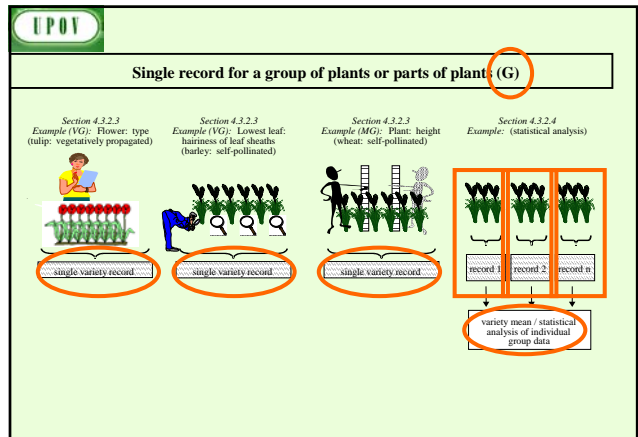
**V: Visual observation:**  
**includes** observations where the expert uses **reference points** (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts).  
 “Visual” observation refers to the sensory observations of the expert and, therefore, also **includes smell, taste and touch**.

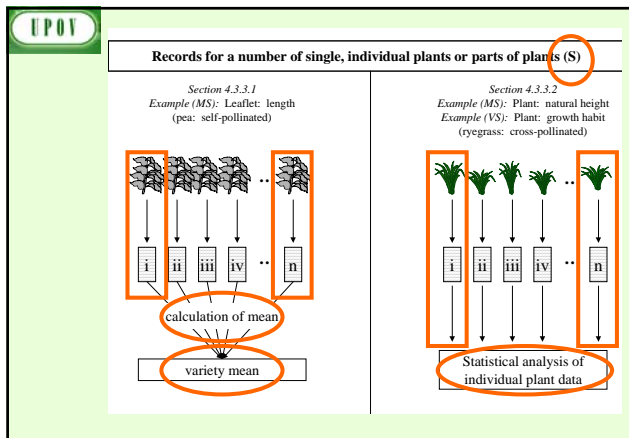
**UPOV** Type of Record  
 (for the purposes of distinctness)

**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 ...





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## 5. TEST GUIDELINES (document TGP/7)

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

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### Standard Test Guidelines Characteristic

Function	Criteria
1. Characteristics that are <b>accepted by UPOV for examination of DUS</b> 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 <b>Chapter 4, section 4.2.</b>  2. Must have been <b>used</b> to develop a variety description <b>by at least one member of the Union.</b>  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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### Asterisked Characteristic

Function	Criteria
1. Characteristics that are important <b>for the international harmonization of variety descriptions.</b>	1. Must be a characteristic included in the Test Guidelines.  2. <b>Should always be examined</b> for DUS and included in the variety description <b>by all members of the Union</b>  <b>EXCEPT</b> 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.

**UPOV**

### Grouping Characteristic

Function	Criteria
characteristics in which the <b>documented states of expression, even where recorded at different locations,</b> can be used either individually or in combination with other such characteristics: <b>(a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness, and/or</b> <b>(b) to organize the growing trial so that similar varieties are grouped together</b>	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 <b>asterisked characteristic</b> and/or included in the <b>Technical Questionnaire</b> or application form.

**UPOV**

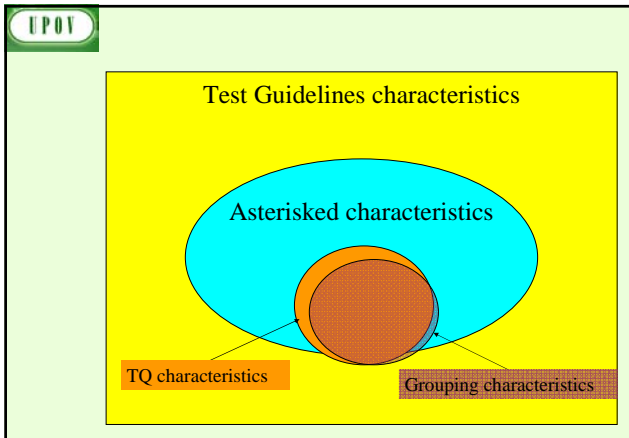
### Relationship between functions

(a) **GROUPING CHARACTERISTICS** selected from the Table of Characteristics should, in general, **receive an asterisk** in the Table of Characteristics and be **included in the Technical Questionnaire.**

(b) **TQ CHARACTERISTICS** selected from the Table of Characteristics should, in general, **receive an asterisk** in the Table of Characteristics and be **used as grouping characteristics.** TQ characteristics are **not restricted** to those characteristics used as grouping characteristics;

(c) **ASTERISKED CHARACTERISTICS** are **not restricted** to those characteristics selected as grouping or TQ characteristics.





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**Exercise:**

**is there a problem?**

UPOV

1.	Branch: length	
	short (<15cm)	1
QN	medium (16-45cm)	2
	long (>45cm)	3

UPOV

2.	Flower: petaloid stamens	
QN	absent	1
	few (>0 - 20% )	2
	medium (>20-95%)	3
	many (>95%)	4

UPOV

3. (+)	One-year-old shoot: position of vegetative bud in relation to shoot	
PQ	adpressed	1
	slightly held out	2
	markedly held out	3

1 adpressed

2 slightly held out

3 markedly held out

UPOV

4.	Leaf blade: texture	
PQ	soft	1
	coriaceous	2

UPOV

5.		<b>Fruit: conspicuousness of lenticels</b>	
QL		inconspicuous	1
		conspicuous	2

UPOV

6. Scape: shape of top

QL	acute	1
	obtuse	2

UPOV

7. Leaf: shape

(\*)

QL	elliptic	Esmamerica	1
	ovate	Barfast	2

UPOV

8. Leaf blade: undulation of margin

QN	absent or very weak	1
	medium	2
	strong	3

UPOV

9. VG Stem: position of long side branches

(\*)

PQ	mainly lower third	1
	mainly middle third	2
	along whole stem	3

UPOV

5. TEST GUIDELINES (document TGP/7)

(e) Example varieties

**UPOV** TG/13/9  
Lettaco/Laitas/Salat Lechuga, 2004-03-31  
- 7 -

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

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Varietades ejemplo	Note/ Nota
1. (*)	Seed: color	Semence: couleur	Samen: Farbe	Semilla: color		
	white	blanche	weiß	blanco	Verpia	1
	yellow	jaune	gelb	amarillo	Durango	2
	black	noire	schwarz	negro	Kagmzer Sommer	3
2. (*)	Seedling: anthocyanin coloration	Plantelet: pigmentation anthocyanique	Keimflanze: Anthocyanfärbung	Plántula: pigmentación antocianica		
	absent	absente	fehlernd	ausente	Verpia	1
	present	présente	vorhanden	presente	Pirat	9
3.	Seedling: size of cotyledons (fully developed)	Plantelet: taille du cotyledon (à complet développement)	Keimflanze: Größe des Keimblatts (voll entwickelt)	Plántula: tamaño del cotiledón (pleno desarrollo)		
	small	petit	klein	pequeño	Romance	3
	medium	moyen	mittel	medio	Expresse	5
	large	grand	groß	grande	Verpia	7

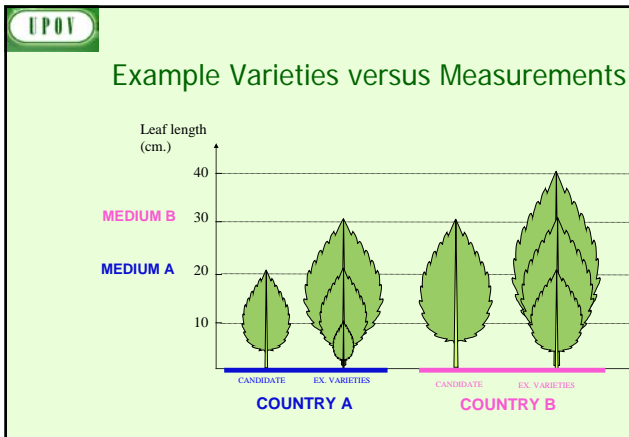
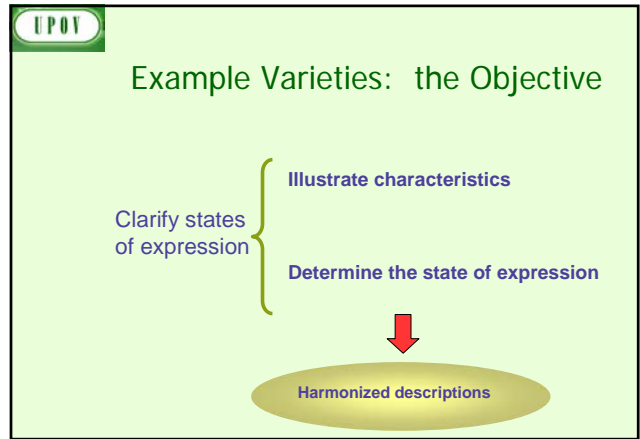
**UPOV** TG/21/1  
Perilla/Pirillo/Perilla Perilla, 2004-03-31  
- 10 -

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Varietades ejemplo	Note/ Nota
14. VG	Leaf blade: intensity of purple color of lower side	Limbe: intensité de la couleur pourpre de la face inférieure	Blattspitze: Intensität der Purpurfarbe der Unterseite	Limbo: intensidad del color púrpura del envés		
QN (a)	very light	très claire	sehr hell	muy claro		1
	light	claire	hell	claro	Perline	3
	medium	moyenne	mittel	medio		5
	dark	foncée	dunkel	oscuro	Petto	7
	very dark	très foncée	sehr dunkel	muy oscuro	Bora, Purple	9
15. VG	Leaf blade: profile	Limbe: profil	Blattspitze: Profil	Limbo: perfil		
QN (a)	concave	concave	konkav	cóncavo	Petto	3
	plane	plan	flach	plano	Pergo, Saeyoupiil	5
	convex	convexe	konvex	convexo		7

**UPOV** TG/21/1  
Brachycome/Blasa Coronadifoncha, 2004-03-31  
- 7 -

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

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Varietades ejemplo	Note/ Nota
1. (*)	Plant: growth type	Plante: type de croissance	Pflanze: Wuchstyp	Planta: tipo de crecimiento		
QN (a)	erect clusters	en grappe à la base	erect/Blüschel	en racimos basales		1
	herbaceous	herbacées	herbig	herbáceas		3
2. (*)	Only varieties with both erect clusters and upright attitude of stems	Seules à la fois de grappes érigées et attitude des tiges	Nur Sorten mit Blüscheln und aufrechten Halbschäften	Sólo variedades con tipo de crecimiento erigido y actitud de los tallos		
QN (a)	upright	dressées	aufrecht	erecto		1
	semi upright	demi-dressées	halbaufrecht	semierecto		3
	horizontal	horizontales	wingerecht	horizontal		5
3.	Only varieties with both erect clusters and upright attitude of stems	Seules à la fois de grappes érigées et attitude des tiges	Nur Sorten mit Blüscheln und aufrechten Halbschäften	Sólo variedades con tipo de crecimiento erigido y actitud de los tallos		
QN (a)	few	peu nombreuses	wenig	pocas		3
	medium	moyennes	mittel	medias		5
	many	nombreuses	viel	muchas		7
4. (*)	Plant: height including flowers	Plante: hauteur, fleurs comprises	Pflanze: Höhe einschließlich Blüten	Planta: altura, incluyendo las flores		
QN (a)	short	basse	niedrig	corta	Mardi-Gras	3
	medium	moyenne	media	mediana	Brookday	5
	tall	élevée	hoch	larga	Happy Face Pink	7



**UPOV**

Example Varieties –the need

NO NEED

illustration provided (e.g. photo); if necessary and

characteristics not used to harmonize descriptions or

characteristics not influenced by the environment

**UPOV**

### Example Varieties – the need

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

and

{ which are **influenced by the environment**

**UPOV**

### Example Varieties - availability

**widely and freely available** { National Authority

{ DUS examiners

{ Breeders

**UPOV**

### 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

**UPOV**

### Example Varieties Fluctuation

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

**UPOV**

### Example Varieties number

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

**UPOV**

### Example Varieties - agreement

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

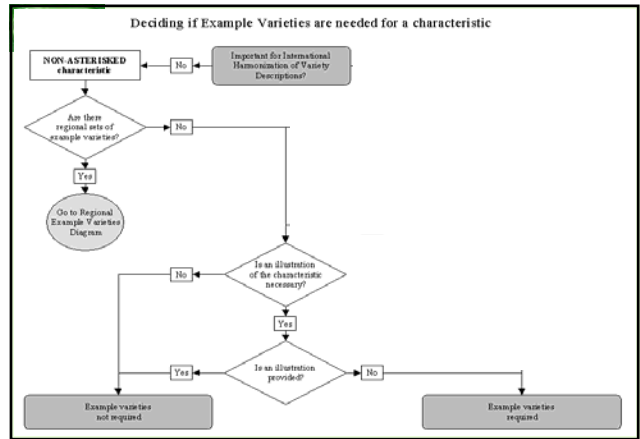
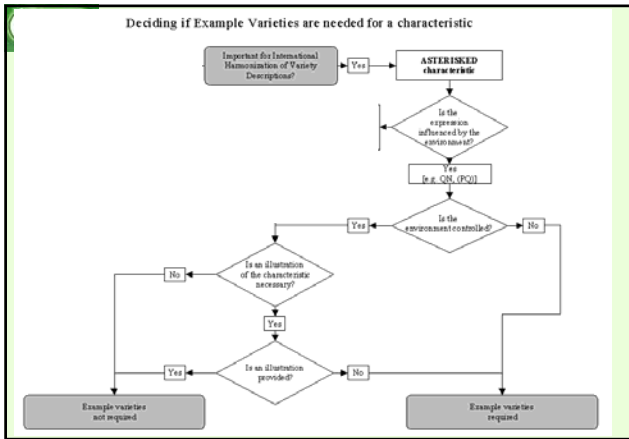
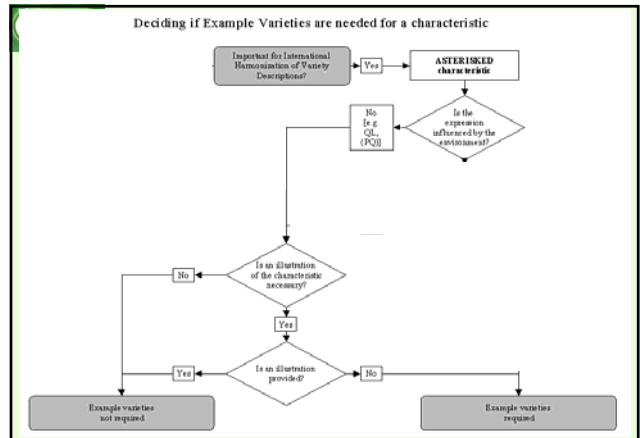
Accepted if **no objections** are presented

**UPOV**

## Example Varieties - multiple sets

Regional Sets  
Different types

clear criteria for creating the sets !



**UPOV**

## Exercise

**UPOV**

English	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
<b>4.</b> (* (+)	<b>Plant: height including flowers</b>	
<b>QN</b> (a) short	?	3
medium		5
tall		7

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>1. (*) (+)</b>	<b>Plant: growth type</b>	?	
<b>QL (a)</b>	basal clusters		1
	bushy		2

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>2. (*) (+)</b>	<b>Only varieties with bushy growth type: Plant: predominant attitude of stems</b>	?	
<b>QN (a)</b>	upright		1
	semi upright		3
	horizontal		5

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>5. (*) (+)</b>	<b>Plant: width including flowers</b>	?	
<b>QN (a)</b>	narrow		3
	medium		5
	broad		7

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>9. (*) (+)</b>	<b>Leaf: margins</b>	?	
<b>QL (a) (b)</b>	entire		1
	divided		2

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>7. (*) (+)</b>	<b>Leaf: length</b>	?	
<b>QN (a) (b)</b>	short		3
	medium		5
	long		7
	very long		9

UPOV			
English	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>20. (*) (+)</b>	<b>Flower: bud color</b>	?	
<b>PQ (c)</b>	RHS Colour Chart (indicate reference number)		

English		Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
10. (* (+)	<u>Only varieties with entire leaf margins:</u> Leaf: shape	?	
PQ	(a) ovate		1
	(b) linear		2
	oblong		3
	elliptic		4
	circular		5
	oblanceolate		6
	obovate		7
	spatulate		8
	obtriangular		9

## 5. TEST GUIDELINES (document TGP/7)

### (f) The process for developing UPOV Test Guidelines


### Test Guidelines

- **249 Test Guidelines** adopted

but...

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

### GENIE Database (Genus / species)



### 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)

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

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## 6. THE UPOV WEBSITE

**UPOV**

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

**UPOV** INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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FRANCAIS DEUTSCH ESPANOL

>Welcome

The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva (Switzerland).

UPOV was established by the International Convention for the Protection of New Varieties of Plants. The Convention was adopted in Paris in 1961 and it was revised in 1972, 1978 and 1991. The objective of the Convention is the protection of new varieties of plants by an intellectual property right.

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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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**UPOV** KEY ISSUES

**NEW PUBLICATION** **UPOV Report on the Impact of Plant Variety Protection** (UPOV Publication 353(E))  
[Executive Summary](#)

Breeder's exemption Breeder's exemption in the 1978 and the 1991 Act of the UPOV Convention ([Adobe PDF](#))

Notion of Breeder and Common Knowledge The Notion of Breeder and Common Knowledge ([Adobe PDF](#))

Genetic Resources and Benefit-Sharing Access to Genetic Resources and Benefit-Sharing (Reply of UPOV to the Notification of April 12, 2005, from the Executive Secretary of the Convention on Biological Diversity (CBD)) ([Adobe PDF](#))

Access to Genetic Resources and Benefit-Sharing (Reply of UPOV to the Notification of June 20, 2003, from the Executive Secretary of the Convention on Biological Diversity (CBD)) ([Adobe PDF](#)) (Adopted by the Council of UPOV, October 23, 2003)

Position of the International Union for the Protection of New Varieties of Plants (UPOV) concerning Decision V1/S of the Conference of the Parties to the Convention on Biological Diversity (CBD) (April 11, 2003) ([Adobe PDF](#))

UPOV and IPGRI to Intensify Cooperation: Meeting on May 13 and 14, 2003

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[First restricted area](#)

[Second restricted area](#)

**Rules Governing the Granting of Observer Status**  
(available in [Adobe PDF](#) format)

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**LIST OF UPOV PUBLICATIONS\***

The following UPOV publications are available on request:

**Abbreviations:**  
 A = Arabic, C = Chinese, D = Dutch, E = English, F = French, FEG = French/English/German, G = German, I = Italian, J = Japanese, P = Portuguese, R = Russian, S = Spanish

UPOV Convention	221	(A)	International Convention for the Protection of New Varieties of Plants
List of Publications		(C)	Plants
Gazette & Newsletter		(D)	text of 1991 only
Laws & Treaties		(E)	
List of Taxa Protected		(F)	
Plant Variety Protection Statistics		(G)	
General Introduction to DUS		(I)	
TGP Documents		(P)	
Test Guidelines		(R)	
Practical Technical Knowledge		(S)	
Cooperation in Examination			
Plant Variety Database			
Training courses			

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[Executive Summary](#)

→ **UPOV DISTANCE LEARNING COURSE DL-205**  
 "Introduction to the UPOV System of Plant Variety Protection Under the UPOV Convention"

Dates of next session: September/October 2006

For details on the course content, categories of inscription and fees ([pdf](#))

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**DRAFTER'S KIT FOR TEST GUIDELINES**

[General Introduction to DUS](#)

[Text Guidelines in Word format](#)

[TGP/7 "Development of Test Guidelines"](#)

[Electronic TG Template](#)

TGP/7 Annex 4:

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

[Additional Characteristics](#)

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**7. AGENDA for the TWO Session**

UPOV

**THANK YOU**