

**UPOV**

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."

**TECHNICAL WORKING PARTY  
FOR  
AGRICULTURAL CROPS**

*Thirty-fifth Session  
Beijing, China*

**PREPARATORY WORKSHOP**

July 2, 2006

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**PROGRAM**

- 1. Introduction to the International Union for the Protection of New Varieties of Plants (UPOV)**
- 2. Introduction to the UPOV Technical Working Parties:  
*The DUS Examination***
- 3. Guidance for DUS Examination:  
*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**
    - types of expression (*QL, QN, PQ*)
    - example varieties
- 5. The UPOV Website**
- 6. Agenda for the TWP Meeting**
- 7. Feedback from Participants**


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## INTRODUCTION TO UPOV

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## WHAT IS UPOV?

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

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

Union internationale pour la **protection des Obtentions Végétales**



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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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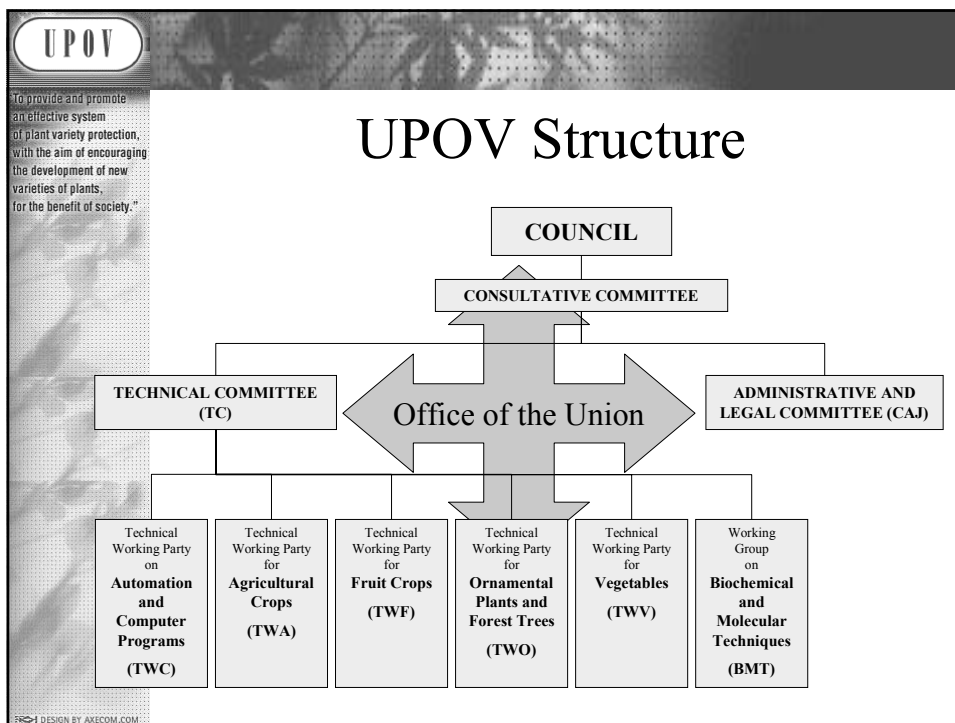
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## THE UNION

- Members of the Union
  - States or Intergovernmental Organizations
- Permanent Organs of the Union
  - The Council - consisting of the representatives of the members of the Union
  - The Office of the Union - carries out all the duties and tasks entrusted to it by the Council

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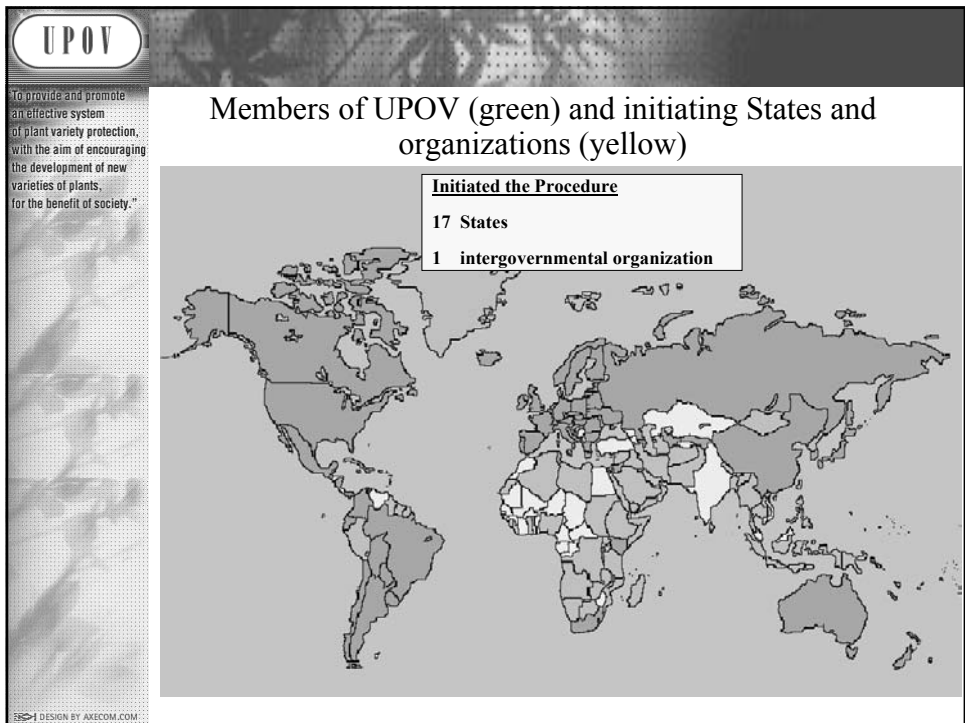
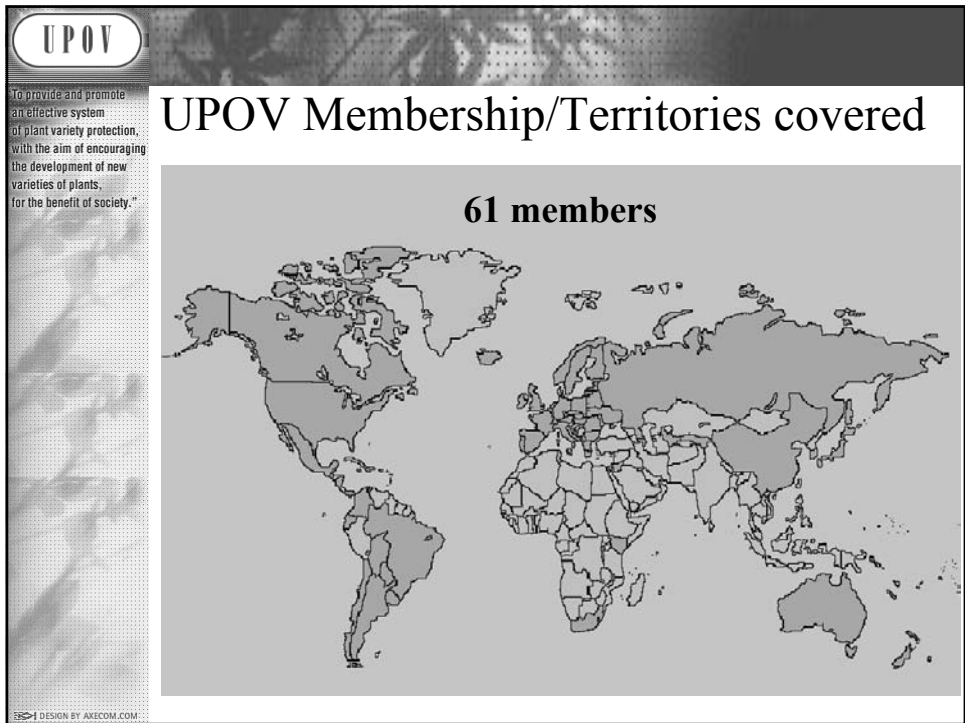
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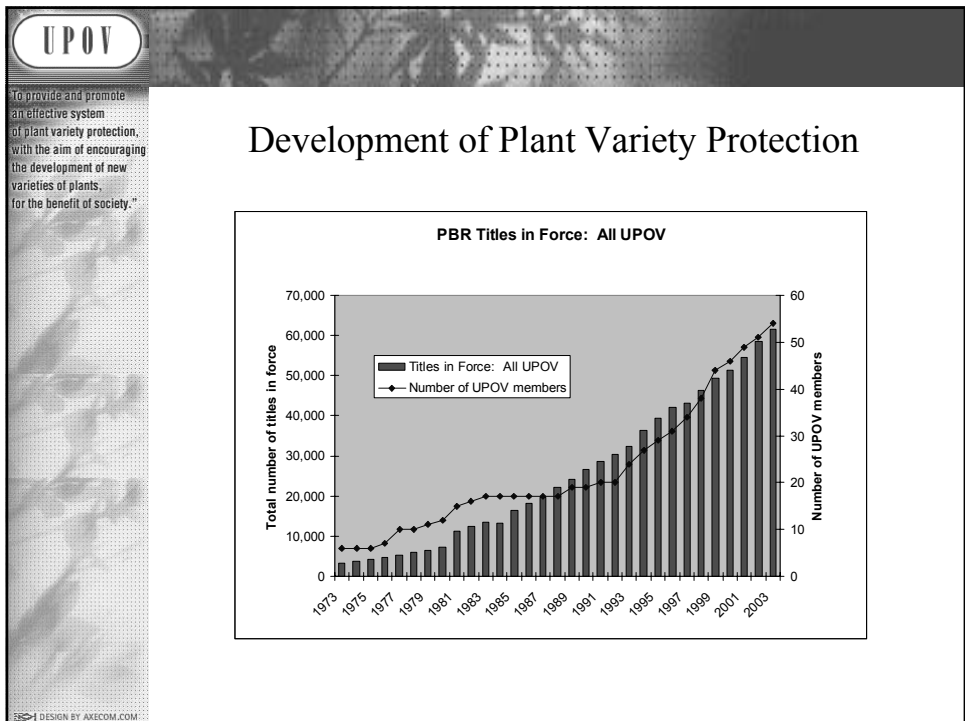
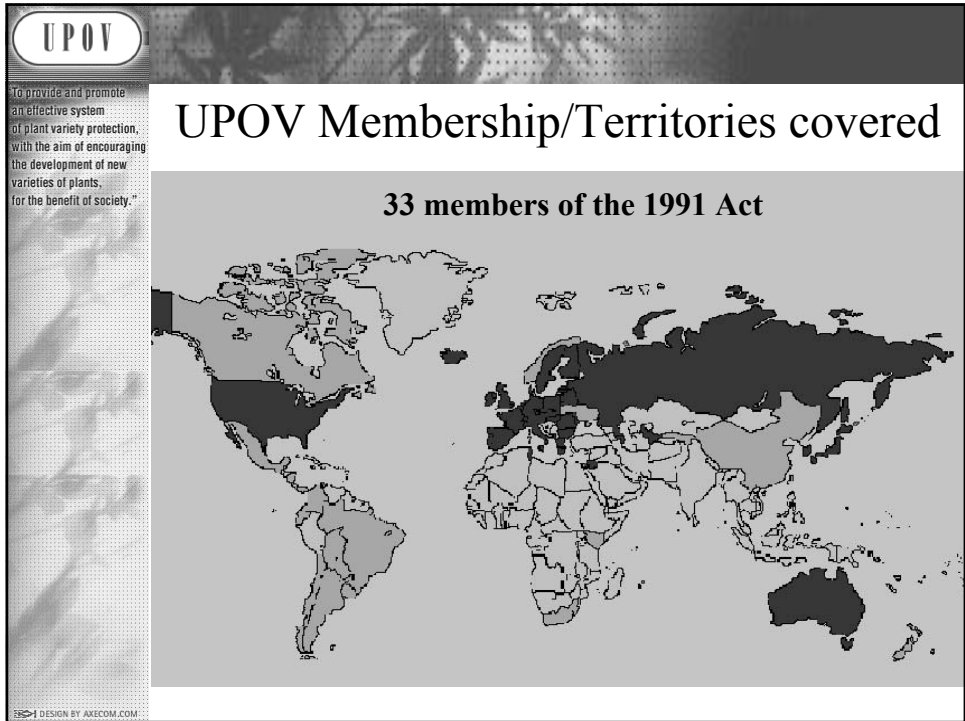
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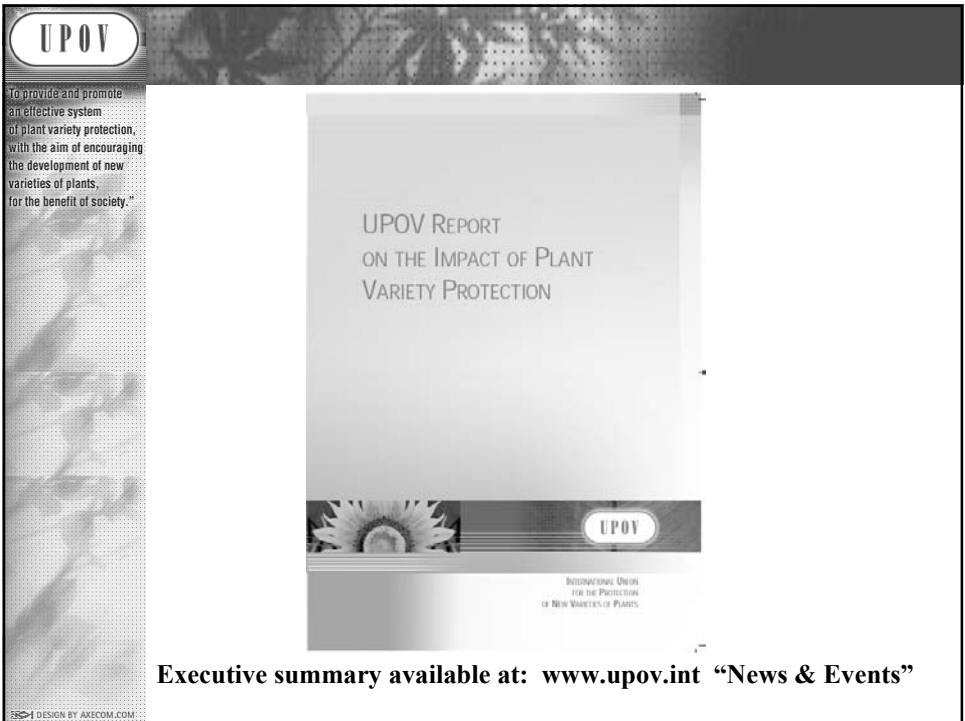
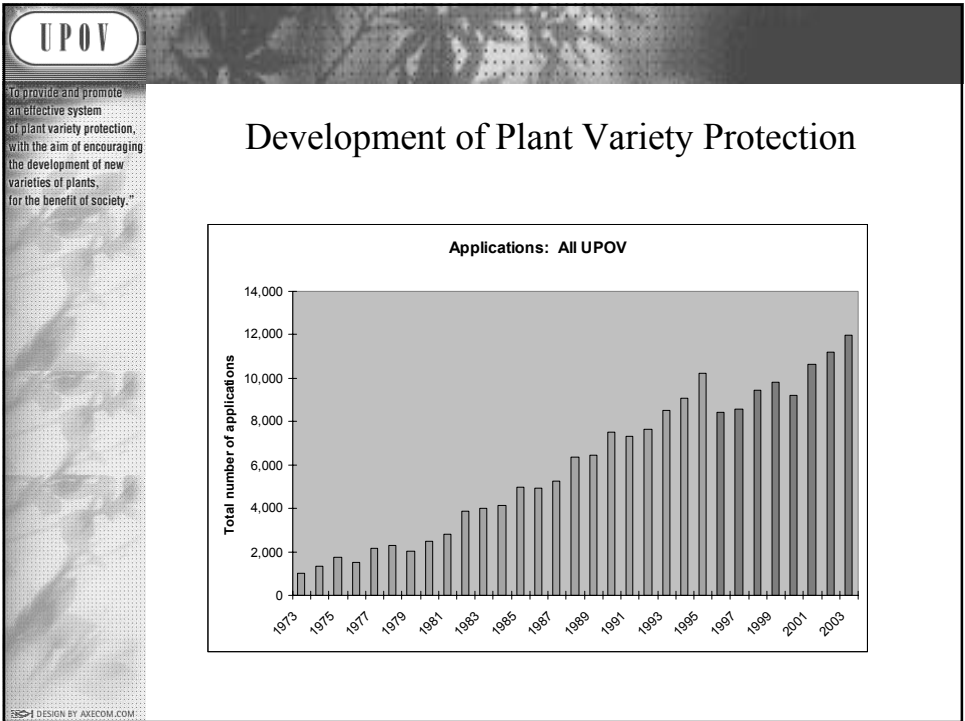
## PLANT VARIETY PROTECTION SITUATION


- 61 members of the Union
- 17 States have initiated the procedure for becoming members of the Union
- 1 intergovernmental organization has initiated the procedure for becoming members of the Union:
  - OAPI (16 countries)
- 47 States have contacted the Office of the Union for assistance in the development of legislation on plant variety protection

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**SECTION II. DEVELOPMENT OF THE UPOV SYSTEM OF PLANT VARIETY PROTECTION**

**UPOV MEMBERSHIP**  
EXPANDING THE PROTECTION A CROSS PLANT GENERA AND SPECIES  
IMPLEMENTATION OF PLANT VARIETY PROTECTION  
EXPANSION OF UPOV: A BENEFIT FOR NEW AND OLD UPOV MEMBERS  
Older UPOV Members: the European Community Countries  
Older UPOV Members: Other Countries  
Newer UPOV Members

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**SECTION III. REPORTS ON STUDIES CONDUCTED IN INDIVIDUAL COUNTRIES**

**ARGENTINA**

1. GENERAL VIEW OF AGRICULTURE IN THE COUNTRY
2. SHORT DESCRIPTION OF THE SEED INDUSTRY
3. PLANT VARIETY PROTECTION SYSTEM
4. IMPACT OF PLANT VARIETY PROTECTION
  - (a) Overall Trends of Varieties Available in the Country
    - (i) Number of Varieties
    - (ii) Improvement of Varieties
  - (b) Foreign Investment / International Dimension
    - (i) Introduction of Foreign Varieties
    - (ii) Development of Foreign Markets
  - (c) Domestic breeding
    - (i) Number of Varieties
    - (ii) Number of Breeders / Investment in Breeding
    - (iii) Structure of the Breeding Industry
  - (d) Summary

**CHINA**

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## Kamil Idris (Secretary-General of UPOV)

“...some very clear messages have emerged from this study, perhaps the most important being that the introduction of the **UPOV system of plant variety protection and membership of the International Union for the Protection of New Varieties of Plants (UPOV) can open a door to economic development, particularly in the rural sector...**”


“... an important conclusion is that the **UPOV system of plant variety protection provides an effective incentive for plant breeding in many different situations and in various sectors, and results in the development of new, improved varieties of benefit for farmers, growers and consumers...**”

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**Ing. Enriqueta Molina Macías**  
(Director, National Service for Inspection and Seed Certification (SNICS), Mexico and President of the UPOV Council)

“It is perhaps worthwhile at the same time as reviewing those benefits to reflect on the importance of the plant genetic resources which form the raw material for the breeders' work. ...**Under the UPOV system, a breeding cycle of progression can continue to maximize the benefits of plant variety protection and plant breeding for the future.**”

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## Expansion of UPOV

Figure 1. Members of UPOV (shown in green): 1990



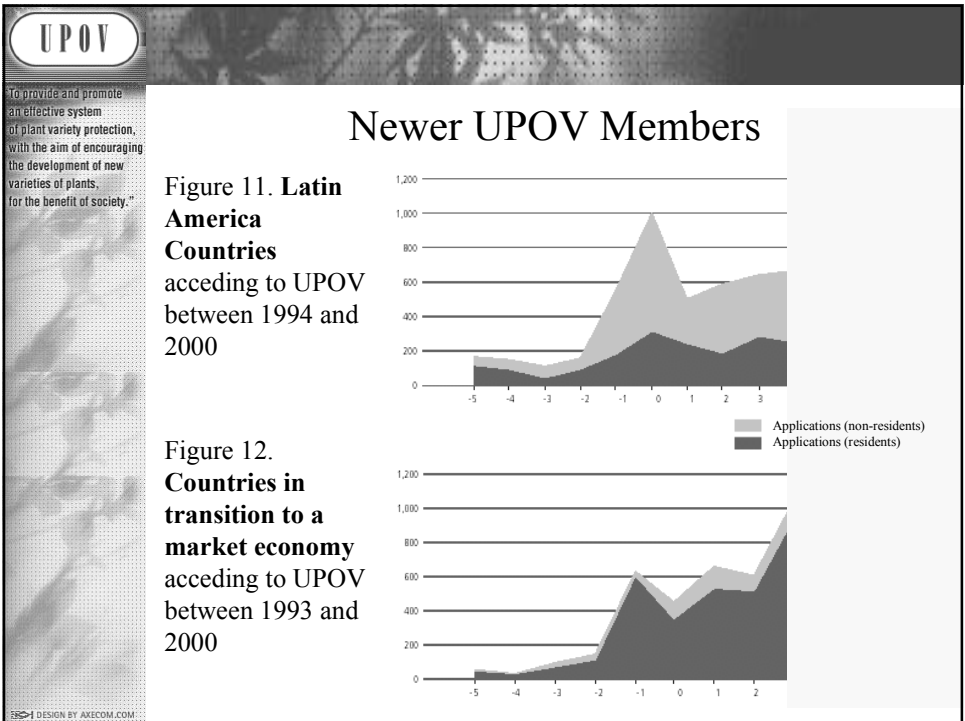
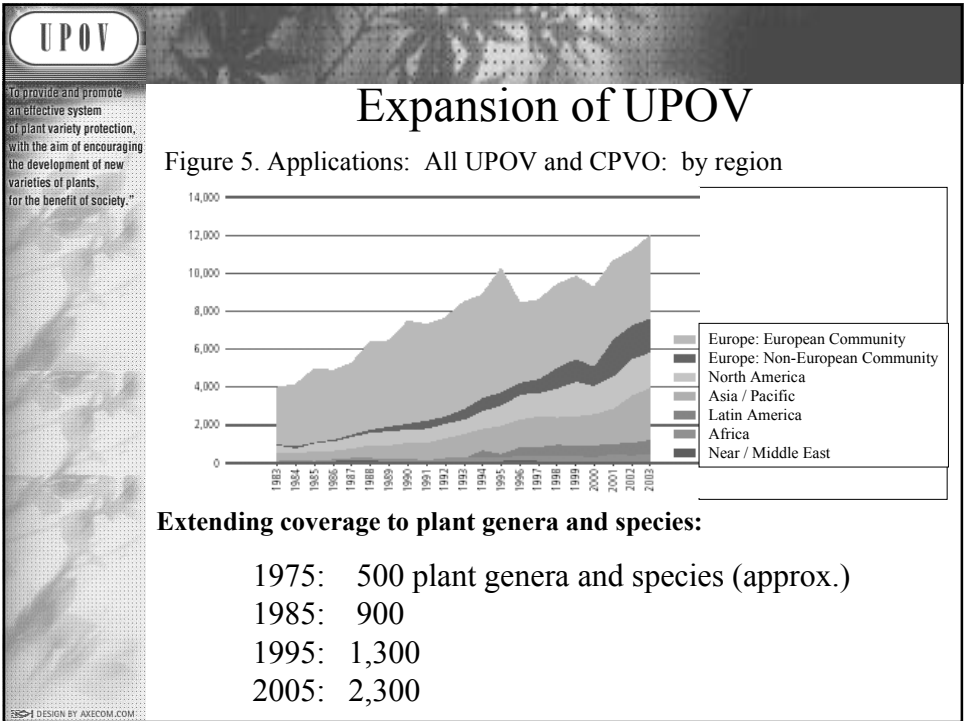


Figure 2. Members of UPOV (shown in dark green) and initiating States and organizations (shown in light green): September 2005



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**SECTION III.**  
**Reports on Studies Conducted  
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Argentina  
China  
Kenya  
Poland  
Republic of Korea

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**SECTION III.**  
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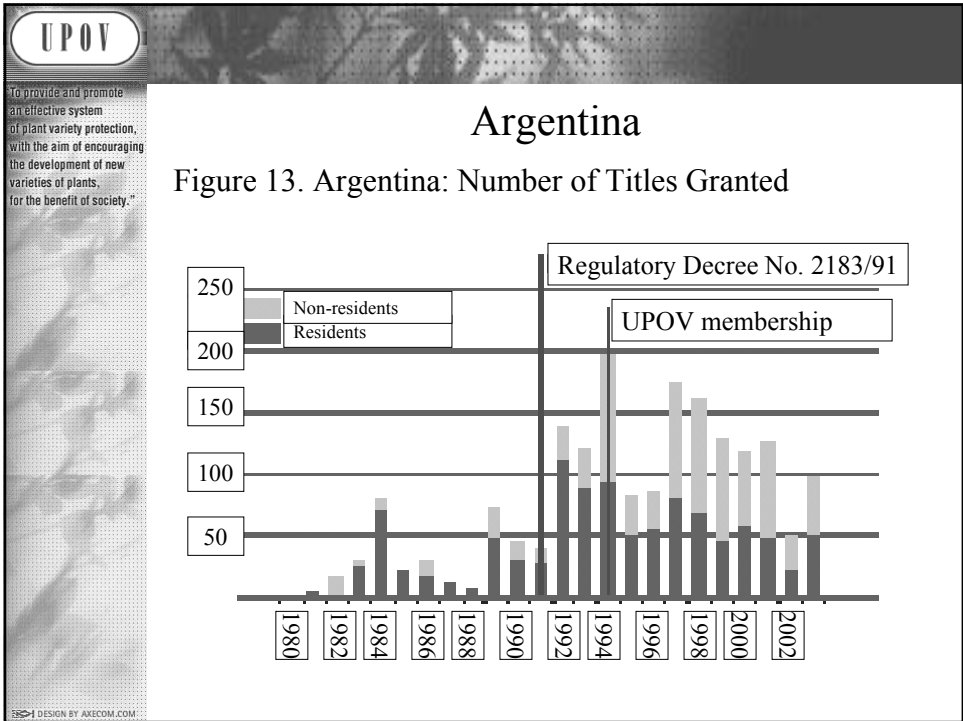
**Chairman**  
Evans O. Sikinyi (Kenya)

**Country Study Representatives**  
Argentina: Marcelo Labarta  
China: Lin Xiangming and Lü Bo (Ministry of Agriculture); Zhou Jianren (State Forestry Administration)  
Kenya: Evans O. Sikinyi  
Poland: Edward S. Gacek and Julia Borys  
Republic of Korea: Choi Keun-Jin

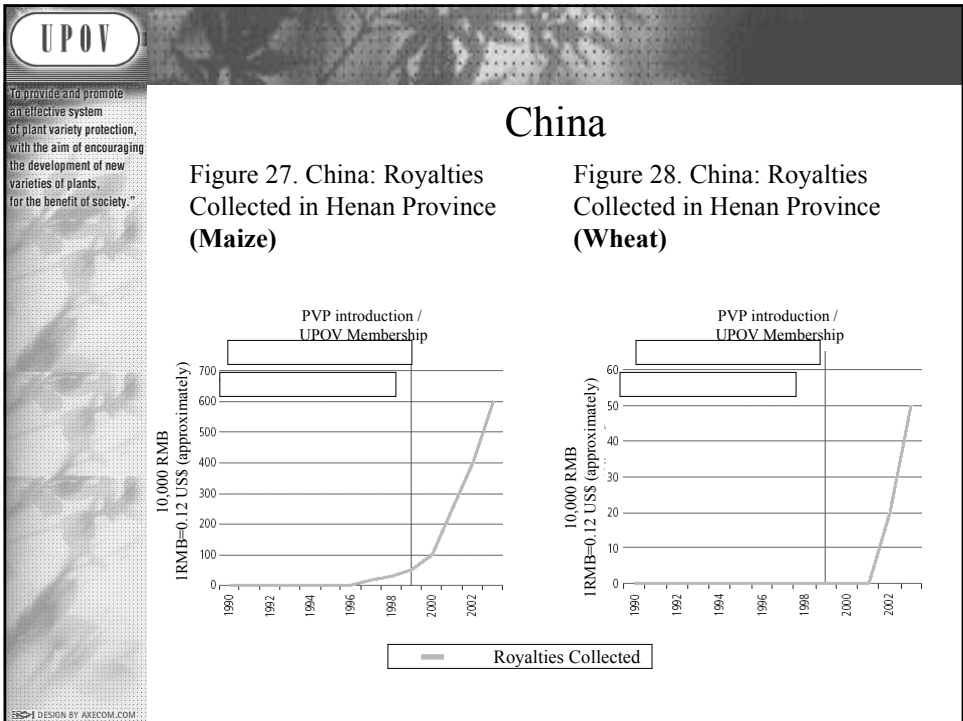
**Advisors / Consultants**  
Chris M.M. van Winden and Arnold J.P. van Wijk (Netherlands)

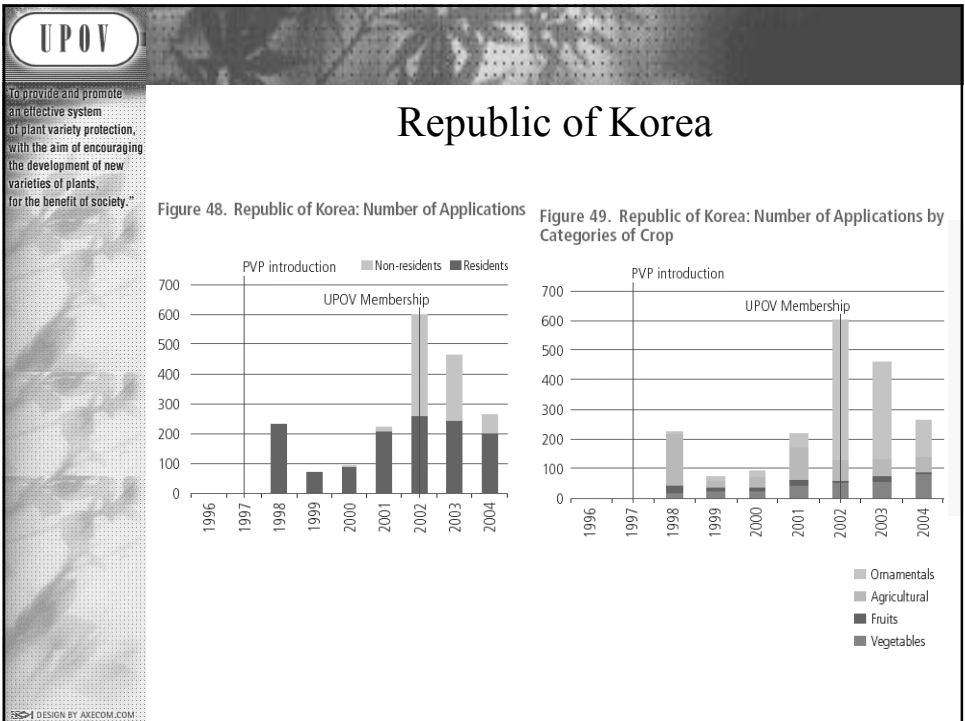
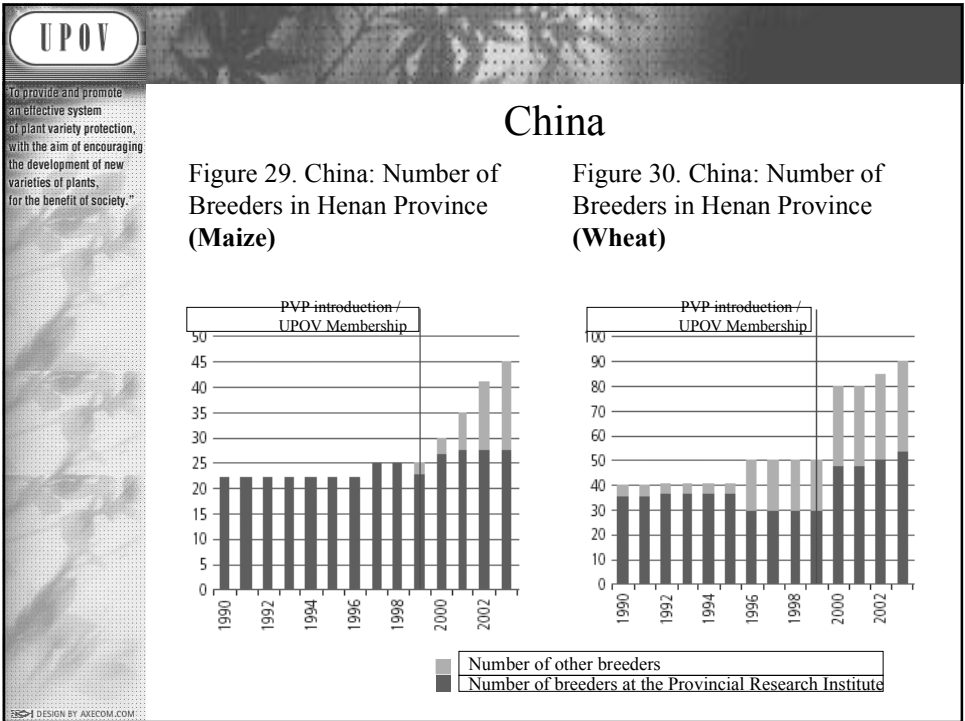
**Coordinator**  
Makoto Tabata (UPOV)

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## Republic of Korea

### Box 27

Root yield and red ginseng proportion of new, protected ginseng varieties

Varieties	Root yield (ton/ha)	Red ginseng percentage (%)
Chunpoong	6.39	38.00
Yunpoong	7.35	20.60
Geumpoong	6.15	35.40
Gopoong	5.73	24.70
Sunpoong	5.70	23.90
Average of conventional varieties	5.46	15.00



High-quality variety "Chunpoong"

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## Republic of Korea

### Box 29

Korean rose variety "Red Angel", granted protection in 2003, was bred using the protected variety "Little Marble", developed in the Netherlands

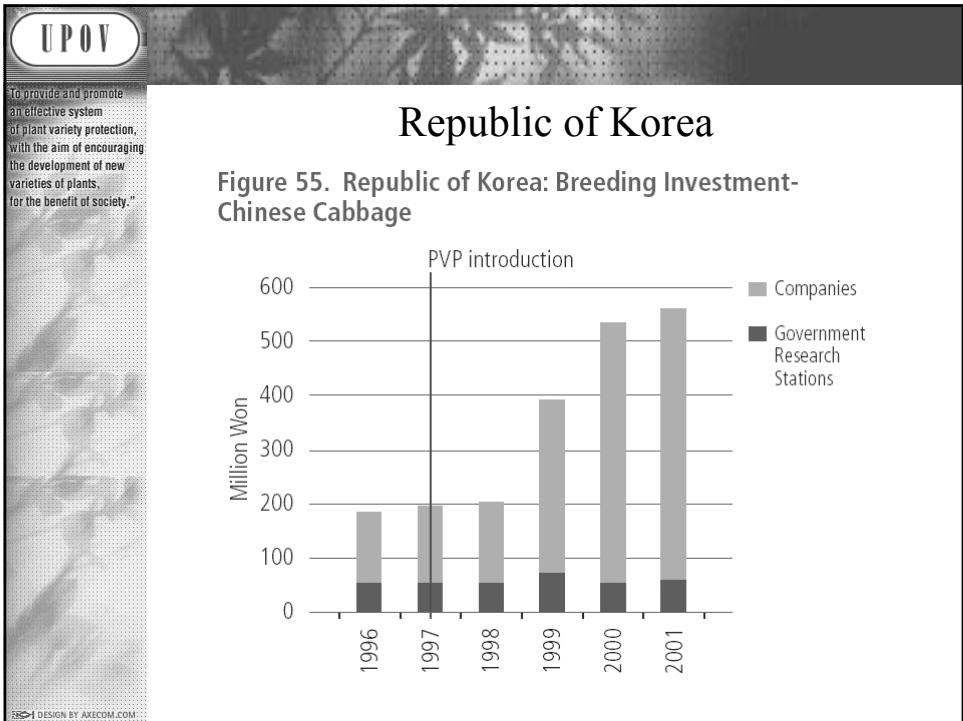
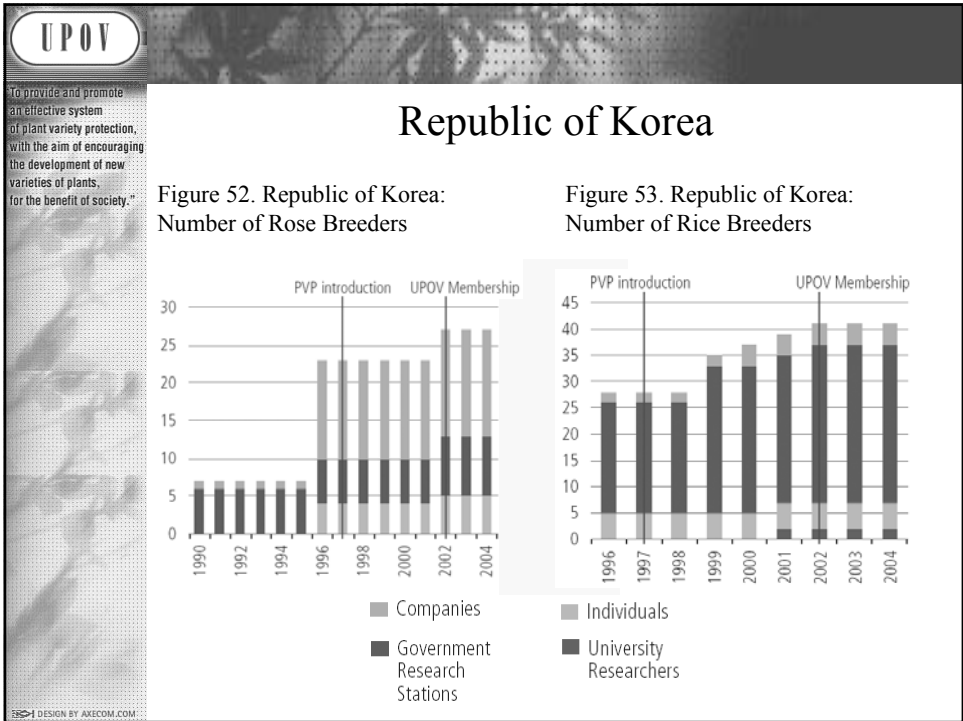


Little Marble (Red variety)  
Developed in the Netherlands



Red Angel (Dark red variety)  
Developed at the Kyunggi Provincial Rural Development Administration  
Crossing of: Princess×Little Marble

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# UPOV in the Asia / Pacific Region

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# Asia/Pacific Region

<p><b><u>Members of the Union</u></b></p> <p>Australia (1991 Act) China Japan (1991 Act) New Zealand Republic of Korea Singapore (1991 Act)</p>	<p><b><u>Initiated the Procedure</u></b></p> <p>India Malaysia Viet Nam</p>
<p><b><u>Contacted the Office</u></b></p> <p>Bangladesh Cambodia Fiji Indonesia Lao People's Democratic Republic Mongolia Myanmar</p>	<p>Nepal Pakistan Philippines Sri Lanka Thailand Tonga</p> 

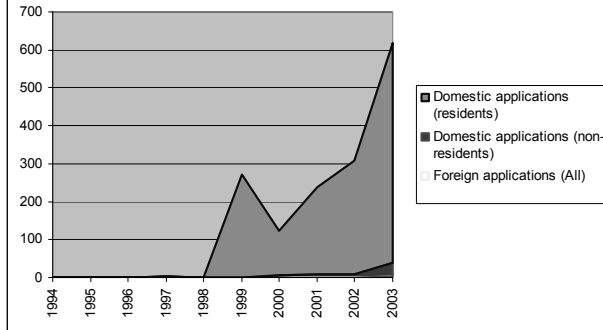
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**Country Summary: China (A/P: 1999)**

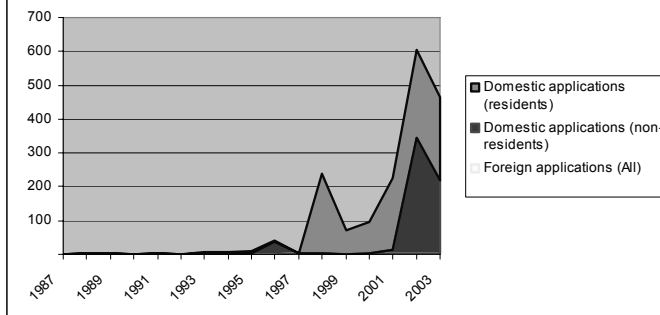


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**Country Summary: Rep. of Korea (A/P: 2002)**

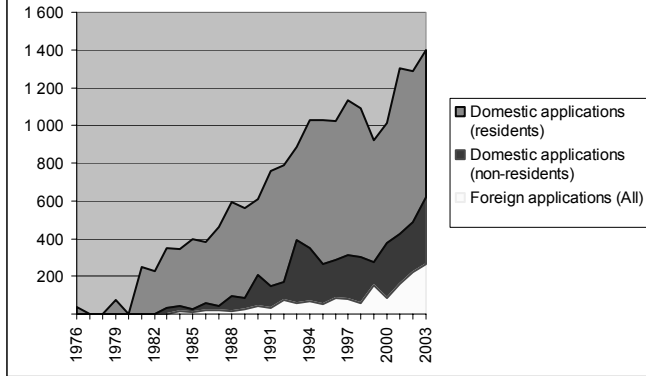


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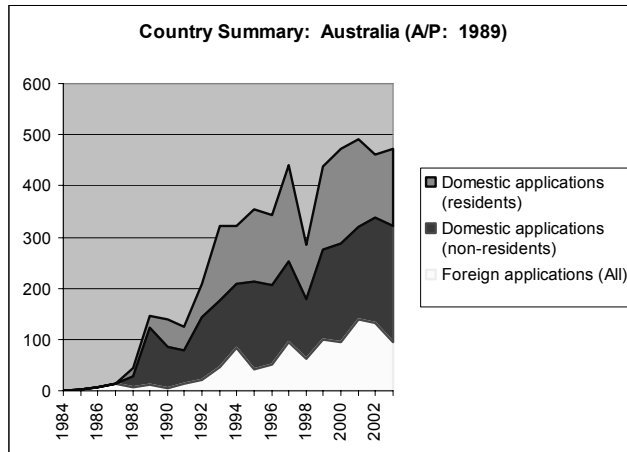
**Country Summary: Japan (A/P: 1982)**



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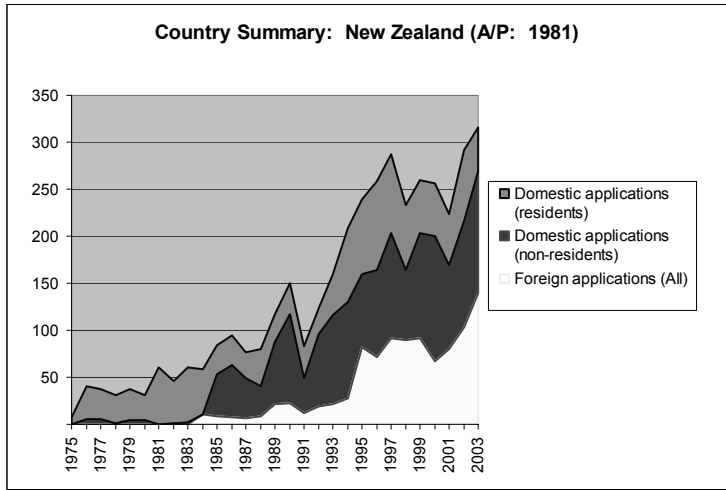
**Country Summary: Australia (A/P: 1989)**



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**Country Summary: New Zealand (A/P: 1981)**

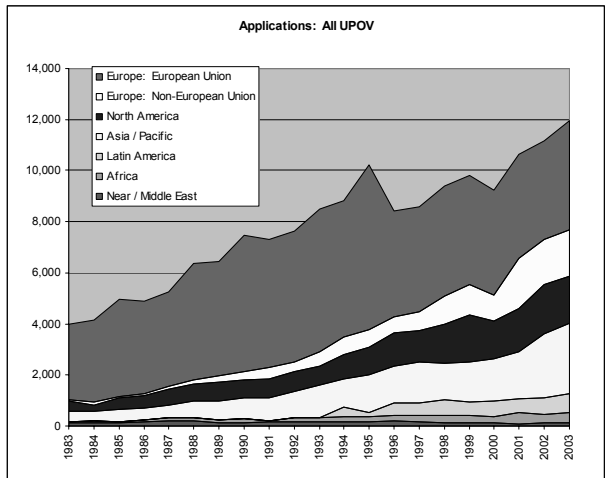


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**Development of Plant Variety Protection**



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## TWP Venues

	TWA	TWC	TWF	TWO	TWV	BMT
1994	Spain	Israel	New Zealand	Australia	UK	France
1995	Germany	Poland	UK	Netherlands	Netherlands	Netherlands
1996	Greece	Germany	Israel	Israel	Czech Rep.	
1997	Uruguay	Hungary	Netherlands	Denmark	Spain	United Kingdom
1998	France	Belgium	Australia	New Zealand	Poland	USA
1999	Canada	Finland	Slovakia	Czech Rep.	Germany	
2000	Sweden	Ukraine	Hungary	Hungary	France	France
2001	Mexico	Czech Rep.	Spain	Japan	Italy	Germany
2002	Brazil	Mexico	Argentina	Ecuador	Japan	
2003	Japan	Denmark	Canada	Canada	Netherlands	Japan
2004	Poland	Japan China (workshop)	Germany	Germany	Rep. of Korea	
2005	New Zealand	Canada	Japan	Rep. of Korea	Slovakia	USA
2006	China	Kenya	Brazil	Brazil	Mexico	Rep. of Korea

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## Introduction to the UPOV Technical Working Parties: The DUS Examination

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### UPOV Convention (1991 act):

- Chapter I - Definitions (breeders and varieties)
- Chapter II - General Obligations
  - Genera and species to be protected
  - National treatment
- Chapter III - Conditions for the Grant of the Breeder's Right
- Chapter IV - Application for the Grant of the Breeder's Right (examination)
- Chapters V-VII - The Rights of the Breeder (scope, exceptions, etc.)
- Chapters VIII - X - About the Union and the Convention

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## THE CONDITIONS FOR GRANTING A BREEDER'S RIGHT

*Criteria to be satisfied*

- NOVELTY
- DISTINCTNESS
- UNIFORMITY
- STABILITY

} "DUS"  
(DHS)

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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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## Examination of the Application

*(Article 12 of the 1991 Act of the UPOV Convention)*

Any decision to grant a breeder's right shall require an **examination for compliance with the conditions under Articles 5 to 9\***. In the course of the examination, the authority may grow the variety or carry out other necessary tests, cause the growing of the variety or the carrying out of other necessary tests, or take into account the results of growing tests or other trials which have already been carried out. For the purposes of examination, the authority may require the breeder to furnish all the necessary information, documents or material.

**\*Article 7, 8, 9 = Distinctness, Uniformity, Stability**

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## THE DUS EXAMINATION

- The meaning of "DUS"
- Nature of the DUS Examination
- Characteristics
- UPOV Guidance for Examination


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## Nature of the DUS Examination

### The "DUS Test" (field trial)



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## DISTINCTNESS

Must be clearly distinguishable from any other variety whose existence is a matter of common knowledge

>>> *CHARACTERISTICS* <<<

which

- *may* have direct *commercial relevance*  
e.g. Flower color (ornamental); Fruit color
- *but commercial relevance* NOT required - often no commercial value  
e.g. Leaf shape

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## DISTINCTNESS

**Apple: Fruit color**



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## DISTINCTNESS

**Apple: Fruit color**



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## DISTINCTNESS

**Apple: Flower bud color**



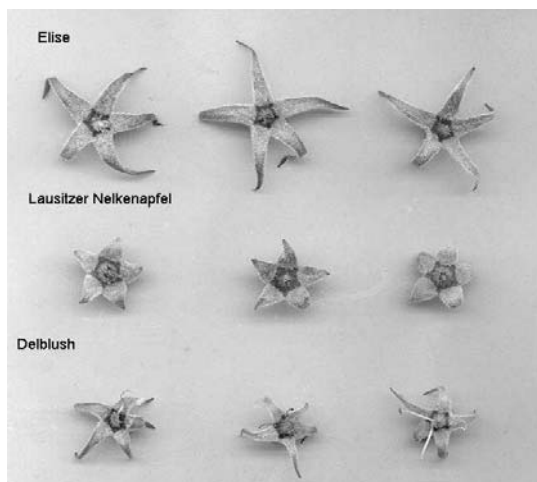
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## DISTINCTNESS

### Apple: Calyx



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## DISTINCTNESS

### Maize: Stem base color



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- **DISTINCTNESS**
- **UNIFORMITY**
  - Must be *sufficiently* uniform in its relevant characteristics, *subject to the variation that may be expected from the particular features of its propagation*


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## UNIFORMITY

**Wheat: (Self-pollinated)**



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## UNIFORMITY

### Ryegrass: Spaced plants (Cross-pollinated)



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### Relative Tolerance Limits

Cross-pollinated varieties, including mainly cross-pollinated and synthetic varieties, generally exhibit wider variations within the variety than vegetatively propagated or self-pollinated varieties and inbred lines of hybrid varieties, and it is more difficult to determine off-types.

Therefore, **relative tolerance limits**, for the range of variation, are set by comparison with comparable varieties, or types, already known.

The candidate variety should not be significantly less uniform than the comparable varieties.

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- **DISTINCTNESS**
- **UNIFORMITY**
- **STABILITY**
  - Relevant characteristics must remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle

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### TESTING STABILITY

- In practice, it is **not usual to perform tests of stability** that produce results as certain as those of the testing of distinctness and uniformity.
- However, for many types of variety, **when a variety has been shown to be uniform, it can also be considered to be stable.**
- Furthermore, **if the variety is not stable, material produced will not conform to the characteristics of the variety**, and where the breeder is unable to provide material conforming to the characteristics of the variety, the breeder's right may be cancelled.
- Where appropriate, or in cases of doubt, **stability may be tested, either by growing a further generation, or by testing a new seed or plant stock** to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

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### Selecting 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	Ear: glucosity	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
ACCEPATABILITY	Yes	Yes	No	No

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## Special Characteristics: Disease Resistance

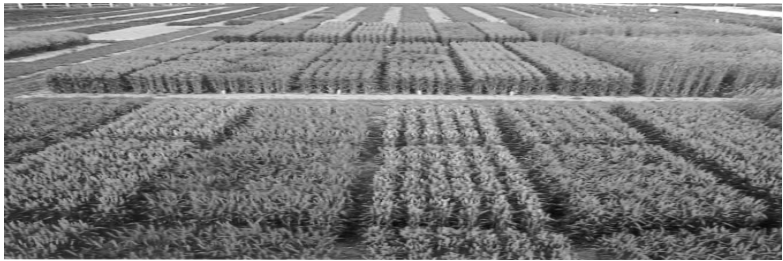
Criteria	Disease Resistance
(a) results from a given genotype or combination of genotypes	*Knowledge of nature of genetic control of resistance is important
(b) sufficiently consistent and repeatable in a particular environment	*Standardize conditions (greenhouse / laboratory) & methodolgy *Standardize 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
	<i>Difficult and expensive</i>

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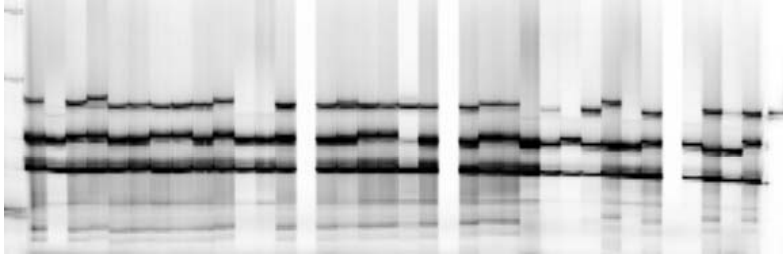


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## Molecular Techniques?



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# GUIDANCE FOR EXAMINATION

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## Guidance for 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 Management 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

\*Priority

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**UPOV provides guidance by:**

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  - 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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**UPOV** TG/217/1 ORIGINAL: English DATE: 2004-04-31 **E**

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

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

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

Alternative Names:<sup>1</sup>

Latin	English	French	German	Spanish
Opuntia, Group 1	Cactus pear, Prickly pear	Figuier de Barbarie	Ferkendaktin	Chambaca, Nopal torero, Tuna
Opuntia, Group 2	Xiconostles	Xiconostles	Xiconostles	Xiconostles

**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.

<sup>1</sup> These names were current at the time of the introduction of these Test Guidelines but may be revised or updated. Readers are advised to consult the UPOV Code, which can be found on the UPOV website ([www.upov.int](http://www.upov.int)), for the latest information.

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## Test Guidelines

- **228 Test Guidelines** adopted
- **Further 63 to be discussed** in 2006  
(25 revisions / 38 new Test Guidelines)

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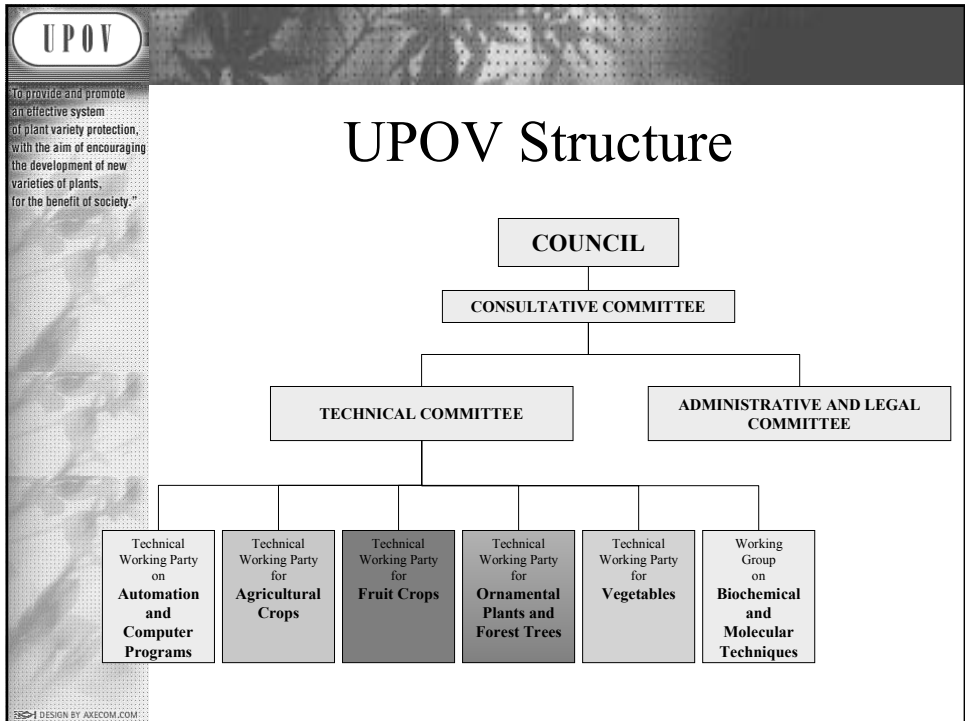
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## UPOV Test Guidelines (“Test Guidelines”)

are developed for  
**individual species / variety groupings**

- Basis for internationally harmonized examination of DUS testing through guidance on the features of DUS Testing e.g.
  - growing cycles of testing (usually one or two)
  - number of plants (6 to 600)
  - material to be tested
  - **characteristics to be examined** (around 30 - 100)
  - **example varieties**
  - uniformity standards

and facilitating harmonized variety descriptions on the basis of selected characteristics
- Drafted by Members’ Experts (Technical Working Parties)



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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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**TGP/7**

**“Development of Test Guidelines”**

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# 1. Introduction

Purpose of document TGP/7:

- ♣ to provide guidance on the development of UPOV Test Guidelines
  - ♣ Procedure for the introduction and revision
  - ♣ Guidance for drafting
    - ♣ Standard format (template)
    - ♣ Standard wording
- ♣ to provide guidance on the development of individual authorities' test guidelines, in the absence of UPOV 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

**Annex 1: The TG Template**

Annex 2: Additional Standard Wording for the TG Template

Annex 3: Guidance Notes for the TG Template

Annex 4: Collection of Approved Characteristics

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## 2. Procedure for the Introduction and Revision of UPOV Test Guidelines

**Rationale for the Procedure:**

- ♣ Transparency
- ♣ Clear responsibility at each step

**Who prepares the draft**

- ♣ Leading expert, interested experts to prepare a draft
- ♣ Technical Working Party to establish a final draft
- ♣ Technical Committee to adopt

**Participation**

- ♣ International non-governmental organizations, invited to sessions of Technical Working Parties and Technical Committee as observers
- ♣ UPOV regional Technical Meetings

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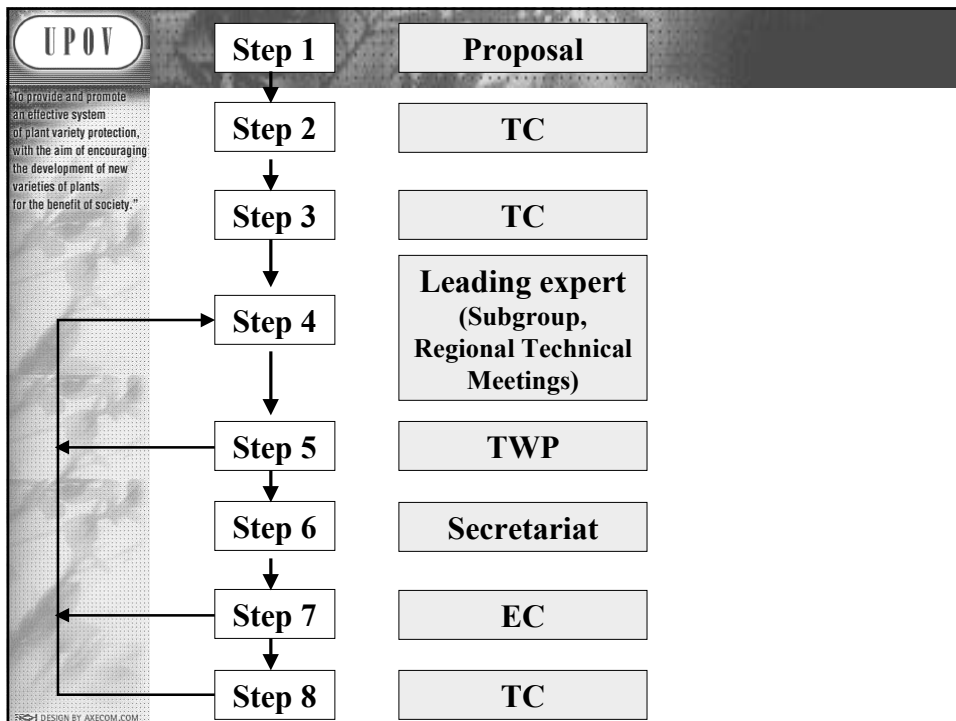
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## 2. Procedure for the Introduction and Revision of UPOV Test Guidelines

- Step 1: Proposals for the Commissioning of Work
- Step 2: Approval of the Proposal
- Step 3: Allocation of Drafting Work
- Step 4: Preparation of Draft TGs for the TWPs
- Step 5: Consideration of the Draft TGs by the TWPs
- Step 6: Submission of Draft TGs by the TWP
- Step 7: Consideration of Draft TGs by the Editorial Committee
- Step 8: Adoption of Draft TGs, by the Technical Committee






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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 (Chapter10)

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**TG/6/5(proj.2)**  
**ORIGINAL:** English  
**DATE:** 2004-06-10

**NATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
 GENEVA

**DRAFT**

LUCERNE  
 UPOV code: MEDIC\_SAT  
*Medicago sativa* L. and  
*Medicago x varia* Martyn

**GUIDELINES**  
**FOR THE CONDUCT OF TESTS**  
**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**  
*prepared by experts from France*  
*to be considered by the*  
*Technical Working Party for Agricultural Crops at its thirty-third session,*  
*to be held in Poznan, Poland, from June 28 to July 2, 2004*

Alternative Names:<sup>\*</sup>

Botanical name	English	French	German	Slovak
<i>Medicago sativa</i> L.	Lucerne, Alfalfa	Luzeerne	Blaue Luzerne	Alfalfa, Mielga
<i>Medicago x varia</i> Martyn				

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/13), and its associated TGP documents, into detailed practical guidance for the harmonised examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonised variety descriptions.

**ASSOCIATED DOCUMENTS**

These guidelines ("Test Guidelines") should be read in conjunction with document TG/13, "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonised Descriptions of New Varieties of Plants" (hereinafter referred to as the "General Introduction") and its associated "TGP" documents.

Other associated UPOV documents:

**E**

\* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. (Readers 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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**DRAFTER'S KIT FOR TEST GUIDELINES**

[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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ORISVA

E

TCH: 000  
ORIGINAL: 000  
DATE: 000

DRAFT

Please select: "View" then "Comments" from the Word menu to see all notes

[MAIN COMMON NAME]

( [types of ] botanical name )

( UPOV Code )

( [CH 1] - Botanical name )

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

prepared by [an expert] / [experts] from  
[drafting country(ies)] / [organization(s)]

to be considered by the  
Technical Working Party for [2000] at its [2000] session  
to be held in [2000] from [2000]

Alternative Names:

Botanical name	English	French	German	Spanish

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/5), and its associated TG documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

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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

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## 1. Subject of These Guidelines

These Test Guidelines apply to all varieties of {...}.

*(examples)*

- These Test Guidelines apply to all varieties of *Oryza sativa* L.
- These Test Guidelines apply to all varieties of *Cichorium intybus* L. partim of the family *Compositae*, excluding witloof (TG/173/3) and leaf chicory (TG/154/3).

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## 2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of {seed, tree, bulb ...}.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

{200 g, 20,... }.

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## 3. Methods of Examination

3.1 Duration of Tests

3.2 Testing Place

3.3 Conditions for Conducting the Examination

[3.3.x Stage of development for the assessment]

[3.3.x Type of observation – visual or measurement]

3.4 Test Design

3.5 Number of Plants / Parts of Plants to be Examined

3.6 Additional Tests

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## 4. Assessment of Distinctness, Uniformity and Stability

Assessment of Uniformity in general:

- It is necessary to take into account:
  - **features of propagation of the variety**
- Methods for Examination of Uniformity
  - **the number of “off-types” (mainly for vegetatively propagated varieties, self-pollinated varieties)**
  - **overall range of variation (mainly for cross-pollinated varieties)**

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## 4. Assessment of Distinctness, Uniformity and Stability

### 4.2 Uniformity

[4.2.1] It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

[4.2.x] Standard wording for **cross-pollinated, hybrid, self-pollinated, vegetatively propagated varieties.**

- [4.2.x] [For the assessment of uniformity, 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, [{ b } off-types are] / [1 off-type is] allowed.]

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## 4. Assessment of Distinctness, Uniformity and Stability

### Counting the number of Off-types

According to the size of the sample examined, statistical tables give the maximum number of off-types tolerated in that give samples

*e.g.:*            *population standard = 1% and*  
                         *acceptance probability = 95%*

<i>Sample size</i>	<i>Number of off-types allowed</i>
<i>1-5</i>	<i>0</i>
<i>6-35</i>	<i>1</i>
<i>36-82</i>	<i>2</i>
<i>83-137</i>	<i>3</i>
<i>138-198</i>	<i>4</i>
<i>199-262</i>	<i>5</i>

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## 5. Grouping of Varieties and Organization of the Growing Trial

5.1 .....

5.2 Grouping characteristics..... can be used,..... :

- (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:

{...}

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## 6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

6.1.2 Asterisked Characteristics (denoted by \*)

6.2 States of Expression and Corresponding Notes

6.3 Types of Expression

**An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo- qualitative) is provided in the General Introduction.**

6.4 Example Varieties


6.5 Legend


(\*) Asterisked characteristic – see Section 6.1.2

(QL) **Qualitative characteristic** – see Section 6.3

(QN) **Quantitative characteristic** – see Section 6.3

(PQ) **Pseudo-qualitative characteristic** – see Section 6.3

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<h2>Format of the Table of Characteristic (Section 7)</h2>							
Char. No. (*) (+) (QL/QN/PO)		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
{GN 18}	Order of characteristics in the Table of Characteristics	{GN 24}	{GN 24}	{GN 24}	{GN 24}		
{GN 19}	Asterisked characteristics	{GN 22}	{GN 25}	{GN 25}	{GN 25}	{GN 12}	{GN 24}
	Recommendations for conducting the examination	States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	Example varieties	Notes
{GN 20}	Explanation of the characteristic	{GN 23}	{GN 25}	{GN 25}	{GN 25}	{GN 12}	{GN 24}
	Growth stage	States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	Example varieties	Notes
{GN 21}	Type of expression of the characteristic	{Other}	{GN 25}	{GN 25}	{GN 25}	{GN 12}	{GN 24}
		States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	States of expression of a characteristic	Example varieties	Notes

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<h2>Order of Characteristics</h2>	
(a)	Botanical order
(i)	The botanical order is as follows: <ul style="list-style-type: none"> <li>• seed (for characteristics examined on seed submitted)</li> <li>• seedling</li> <li>• plant (e.g. growth habit)</li> <li>• root</li> <li>• root system or other subterranean organs,</li> <li>• stem</li> <li>• leaf (blade, petiole, stipule)</li> <li>• inflorescence</li> <li>• flower (calyx, sepal, corolla, petal, stamen, pistil)</li> <li>• fruit</li> <li>• seed (for characteristics examined on seed harvested from the growing trial).</li> </ul>
(ii)	with the characteristics of the whole organ followed by those of its parts, from large to small, outer/lower parts to inner/higher parts



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## Order of Characteristics

**or** (b) Chronological order;

**followed by**

(c) Characteristic order

- attitude
- height
- length
- width
- size
- shape
- color

other details (such as surface, etc., and individual parts of the organ such as base, apex and margin).

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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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### 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)).

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### 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.

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### Quantitative Characteristics

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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### 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.

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### Pseudo-Qualitative Characteristics

36. (*)	VG	Fruit: ground color of skin
PQ	(e)	not visible
		whitish yellow
		yellow
		whitish green
		yellow green
		green

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### Pseudo-Qualitative Characteristics

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.


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## 7. Table of Characteristics

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

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

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## Quantitative Characteristics

weak/strong  
short/long  
small/large

Note	State
1	very weak (or: absent or very weak)
2	very weak to weak
<b>3</b>	<b>weak</b>
4	weak to medium
<b>5</b>	<b>medium</b>
6	medium to strong
<b>7</b>	<b>strong</b>
8	strong to very strong
9	very strong

Note	State
1	very small (or: absent or very small)
2	very small to small
<b>3</b>	<b>small</b>
4	small to medium
<b>5</b>	<b>medium</b>
6	medium to large
<b>7</b>	<b>large</b>
8	large to very large
9	very large

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## Quantitative Characteristics

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

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

Standard Range Version 3
-
3 weak
5 medium
7 strong
9 very strong

Standard Range Version 4
-
3 weak
5 medium
7 strong
-

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## Quantitative Characteristics

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

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## Quantitative Characteristics

### Limited range

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

### Condensed range

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

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

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## Pseudo-qualitative Characteristics

*Qualitative characteristic*

Color: green (1), yellow (2), red (3)

*Pseudo-qualitative characteristic:*

Color: green (1), yellow green (2), green yellow (3), yellow (4), orange (5), red (6)

Shape: round (1), broad elliptic (2), elliptic (3), elliptic to ovate (4), ovate (5)

Not: Shape: round (1), intermediate (2), elliptic (3), intermediate (4), ovate (5)

Color: light green (1), medium green (2), dark green (3), purple green (4)

Not: Color: light green (1), green (2), dark green (3), purple green (4)

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## Pseudo-qualitative Characteristics

Shape: broad elliptic (1), medium elliptic (2), narrow elliptic (3), ovate (4)

Not: Shape: broad elliptic (1), elliptic (2), narrow elliptic (3), ovate (4)

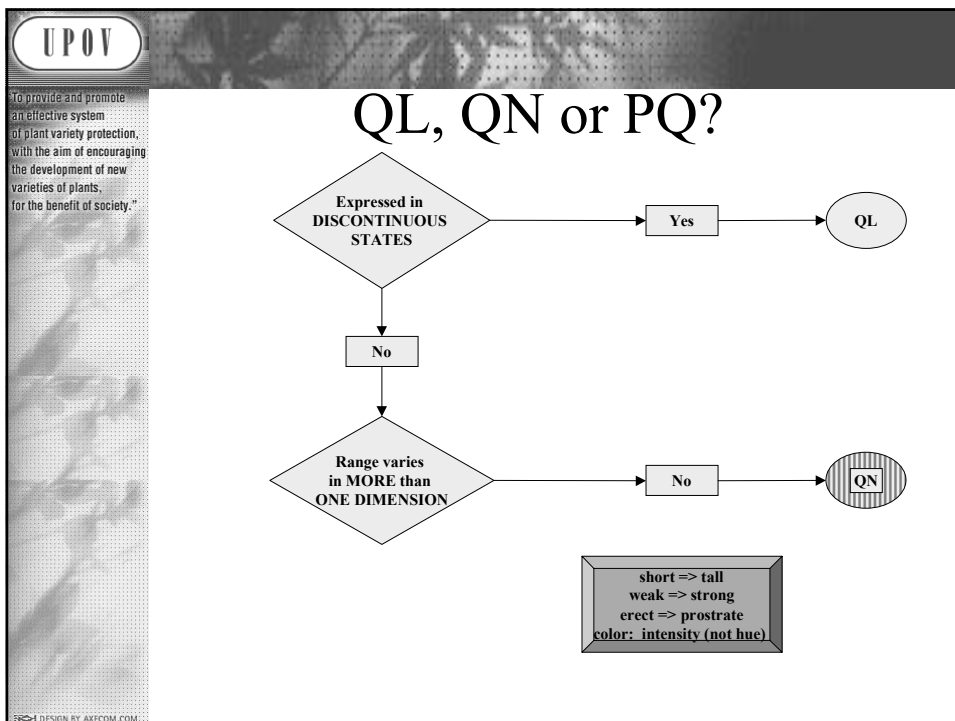
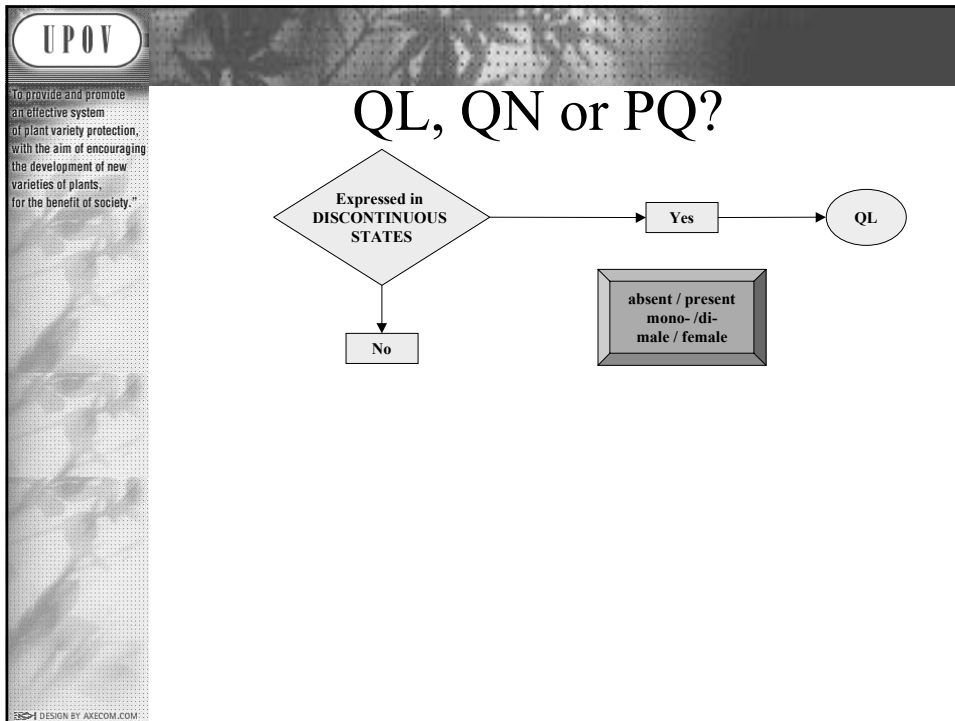
Color of spots: only green (1); green and purple (2); only purple (3)

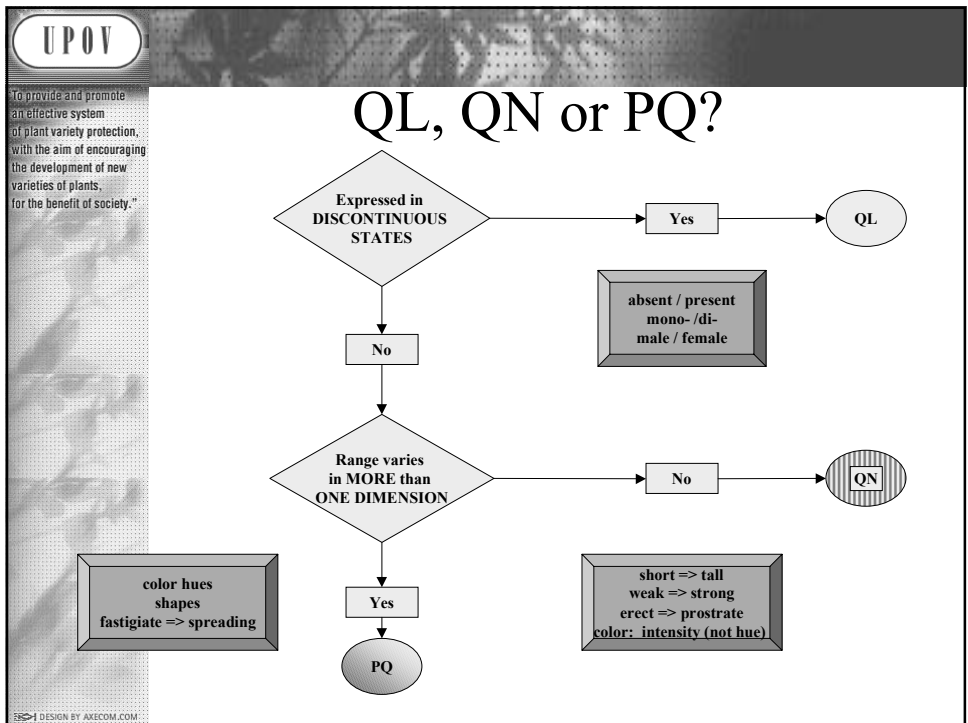
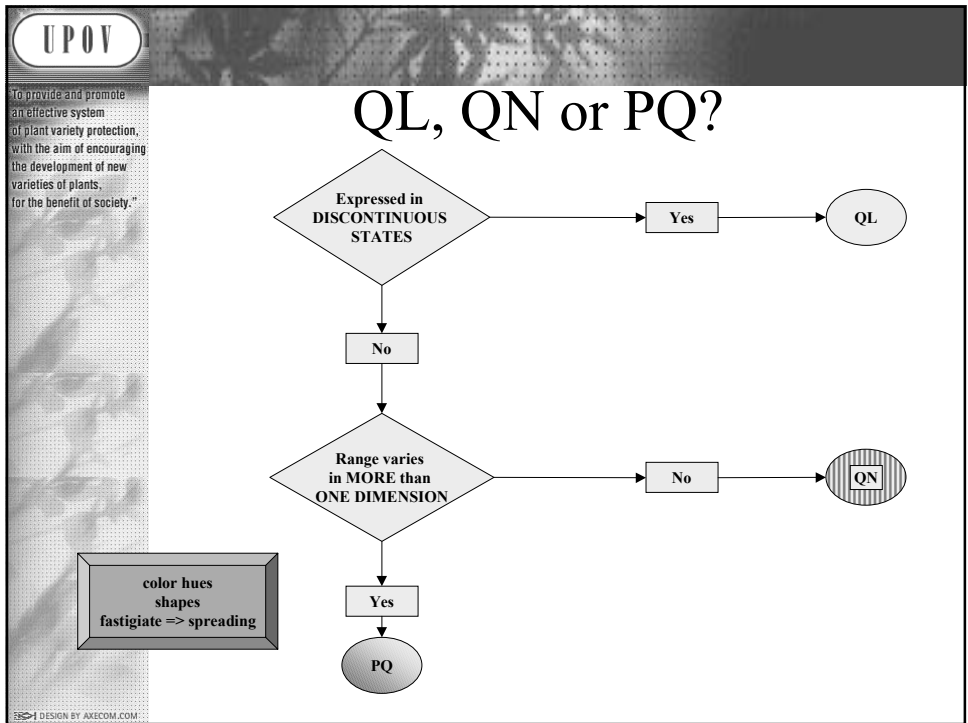
Type of mottling: only diffuse (1);  
diffuse and in patches (2);  
 diffuse, in patches and linear bands (3);  
diffuse and in linear bands (4).

Width: narrow (3), medium (5), broad (7)

Not: Shape: narrow ovate (1), ovate (2), broad ovate (3)

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# EXERCISE

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## Types of Expression


**QL: Qualitative**

**QN: Quantitative**

**PQ: Pseudo-qualitative**

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

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

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**1. Leaf blade: folding**

closed	1
open	2

---

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**1. Plant: rhizomes**

absent	1
present	9

---

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**1. Plant: growth habit**

erect	1
semi erect	3
medium	5
semi prostrate	7
prostrate	9

---

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**1. Leaf: length**

very short	1
short	3
medium	5
long	7
very long	9

---

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<b>1.</b>	<b>Lemma: hairiness</b>	
	absent	1
	present	9
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<b>1.</b>	<b>Tree: distribution of flower buds</b>	
	predominantly on spurs	1
	equally on spurs and on one-year-old shoots	2
	predominantly on one-year-old shoots	3
<hr/> <p>DESIGN BY AXECOM.COM</p>		



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<hr/>	
<b>1.</b>	<b>Leaf blade: ratio length/width</b>
very small	1
small	3
medium	5
large	7
very large	9
<hr/>	
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<hr/>	
<b>1.</b>	<b>Leaf blade: intensity of green color of upper side</b>
light	3
medium	5
dark	7
<hr/>	
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**1. Leaf blade: shape of base**

acute	1
obtuse	2
truncate	3
cordate	4

---

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

straight or weakly concave	1
moderately concave	2
strongly concave	3

---

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

below	1
same level	2
above	3

---

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

broad elliptic	1
circular	2
oblate	3

---

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**1. Petal: color on lower side**

white	1
light pink	2
dark pink	3

---

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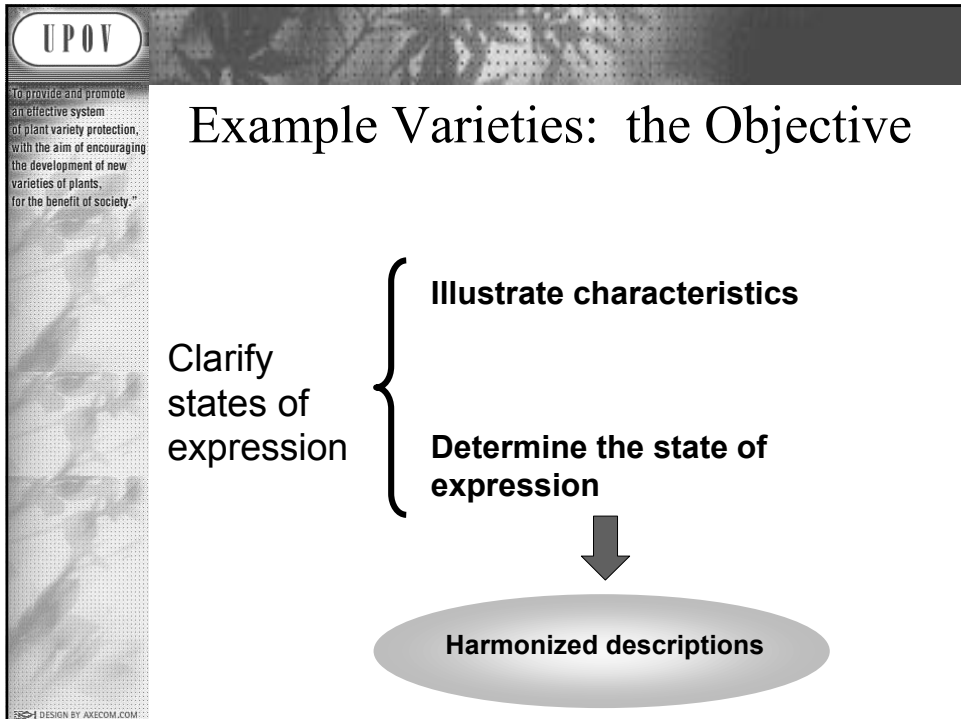
**EXAMPLE VARIETIES**

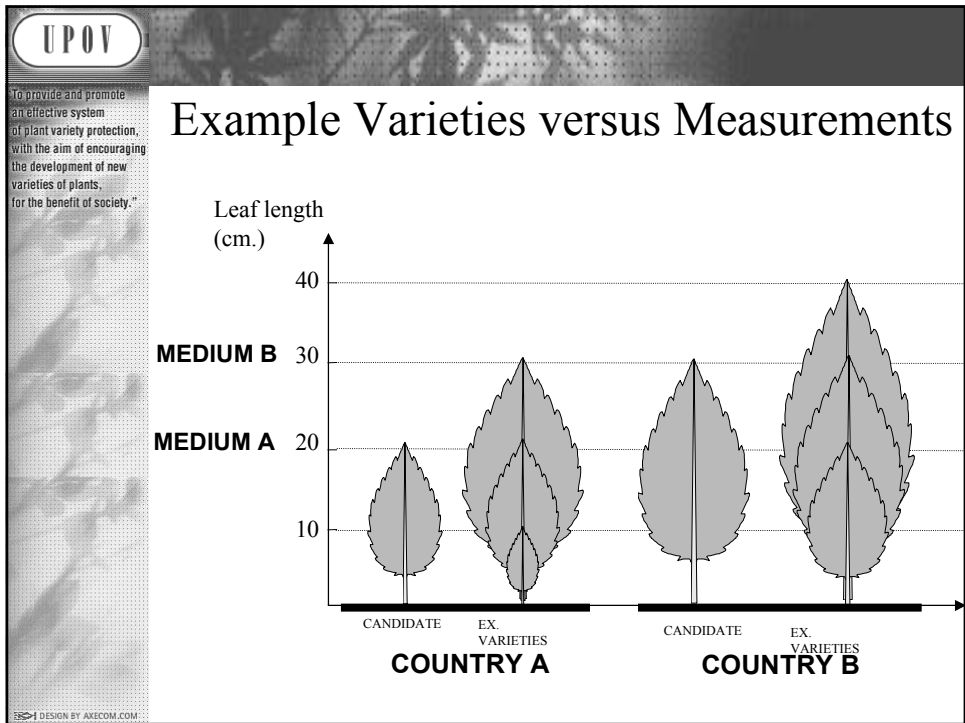
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UPOV						
TG/13/9 Lettuce/Laitue/Salat/Lechuga, 2004-03-31 - 7 -						
7. <u>Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres</u>						
English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota	
<b>1. (*)</b>	<b>Seed: color</b>	<b>Semence: couleur</b>	<b>Samen: Farbe</b>	<b>Senilla: color</b>		
	white	blanche	weiß	blanco	Verpia 1	
	yellow	jaune	gelb	amarillo	Durango 2	
	black	noire	schwarz	negro	Kagrner Sommer 3	
<b>2. (*) (+)</b>	<b>Seedling: anthocyanin coloration</b>	<b>Plantule: pigmentation anthocyanique</b>	<b>Keimpflanze: Anthocyanfärbung</b>	<b>Plántula: pigmentación antocianica</b>		
	absent	absente	fehlend	ausente	Verpia 1	
	present	présente	vorhanden	presente	Pirat 9	
<b>3.</b>	<b>Seedling: size of cotyledon (fully developed)</b>	<b>Plantule: taille du cotylédon (à complet développement)</b>	<b>Keimpflanze: Größe des Keimblatts (voll entwickelt)</b>	<b>Plántula: tamaño del cotiledón (plenamente desarrollado)</b>		
	small	petit	klein	pequeño	Romance 3	
	medium	moyen	mittel	medio	Expresse 5	
	large	grand	groß	grande	Verpia 7	

UPOV						
TG/219/1 Perilla/Pérille/Perilla/Perilla, 2004-03-31 - 10 -						
English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota	
<b>14. VG</b>	<b>Leaf blade: intensity of purplish color of lower side</b>	<b>Limbe: Intensité de la couleur pourpre de la face inférieure</b>	<b>Blattspreite: Intensität der Purpurfarbe der Unterseite</b>	<b>Limbo: Intensidad del color púrpuro del envés</b>		
<b>QN (a)</b>	very light	très claire	sehr hell	muy claro	1	
	light	claire	hell	claro	Perlime 3	
	medium	moyenne	mittel	medio	5	
	dark	foncée	dunkel	oscuro	Perro 7	
	very dark	très foncée	sehr dunkel	muy oscuro	Bora, Purple 9	
<b>15. VG</b>	<b>Leaf blade: profile</b>	<b>Limbe: profil</b>	<b>Blattspreite: Profil</b>	<b>Limbo: perfil</b>		
<b>QN (a)</b>	concave	concave	konkav	cóncavo	Perro 3	
	plane	plan	flach	plano	Pergro, Saecypsil 5	
	convex	convexe	konvex	convexo	7	

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TG/223/1 Brachyscome/Blaues Gänseblümchen, 2005-04-06 - 7 -						
7. Table of Characteristics/ Tableau des caractères/ Merkmalsstabelle/ Tabla de caracteres						
	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
1. (*) (*)	<b>Plant: growth type</b>	<b>Plante: type de croissance</b>	<b>Pflanze: Wuchstyp</b>	<b>Planta: tipo de crecimiento</b>		
<b>QL (a)</b>	basal clusters	en amas à la base	basale Büschel	en racimos basales		1
	bushy	buissonnant	buschig	arbovistivo		2
2. (*)	<b>Only varieties with bushy growth type: Plant: predominant attitude of stems</b>	<b>Variétés à type de croissance: <u>buissonnant</u>: Plante: <u>arbovistivo</u>: Plante: port le plus fréquent des tiges</b>	<b>Nur Sorten mit <u>buschigem</u> Wuchstyp: Pflanze: vorwiegende Haltung der Triebe</b>	<b>Sólo variedades con tipo de crecimiento <u>arbovistivo</u>: Planta: porte predominante de los tallos</b>		
<b>QN (a)</b>	upright	dressées	aufrecht	erecto		1
	semi upright	demi-dressées	halbaufrecht	semierecto		3
	horizontal	horizontales	waagrecht	horizontal		5
3.	<b>Only varieties with bushy growth type: Plant: number of stems</b>	<b>Variétés à type de croissance: <u>buissonnant</u>: Plante: <u>arbovistivo</u>: Plante: nombre de tiges</b>	<b>Nur Sorten mit <u>buschigem</u> Wuchstyp: Pflanze: Anzahl Triebe</b>	<b>Sólo variedades con tipo de crecimiento <u>arbovistivo</u>: Planta: número de tallos</b>		
<b>QN (a)</b>	few	peu nombreuses	klein	bajo		3
	medium	moyennement nombreuses	mittel	medio		5
	many	nombreuses	groß	alto		7
4. (*) (*)	<b>Plant: height including flowers</b>	<b>Plante: hauteur, fleurs comprises</b>	<b>Pflanze: Höhe einschließlich Blüten</b>	<b>Planta: altura, incluidas las flores</b>		
<b>QN (a)</b>	short	basse	niedrig	corta	Mardi Gras	3
	medium	moyenne	mittel	media	Breakoday	5
	tall	élevée	hoch	larga	Happy Face Pink	7





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### Example Varieties –the need

**NO NEED** { illustration available (e.g. photo) and  
characteristics NOT used to harmonize descriptions or  
characteristics NOT influenced by the environment

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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 Fluctuation

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

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## Example Varieties number

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

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## Example Varieties - agreement

**Proposed by the leading expert of the TG**

**Accepted if no objections are presented**

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## Example Varieties - multiple sets

**Regional Sets**

**Different types**

➔

clear  
criteria for  
creating  
the sets

!

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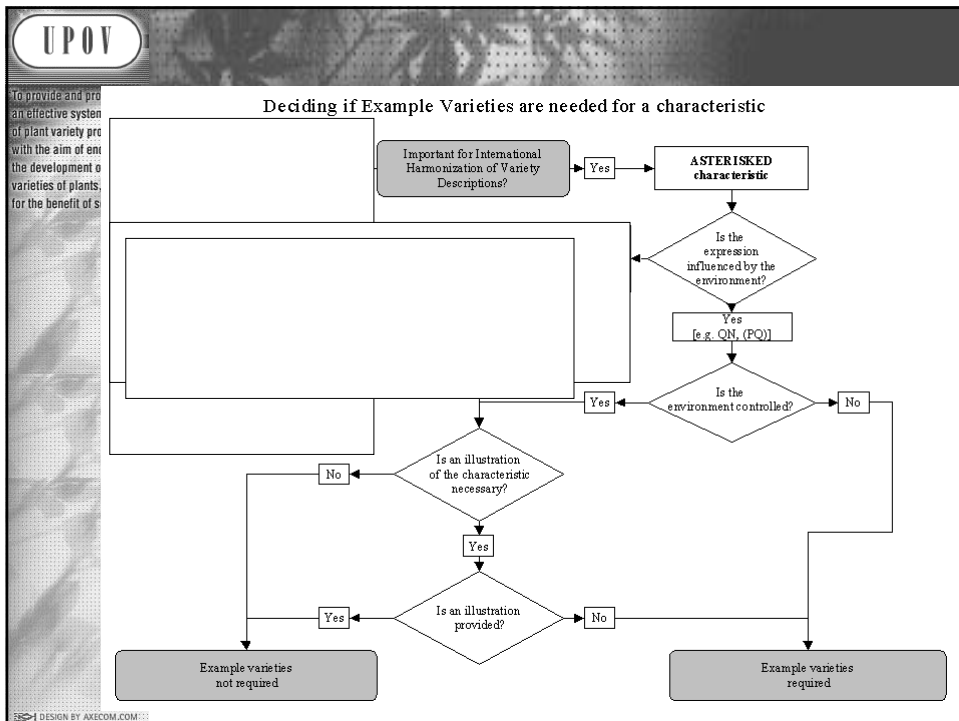
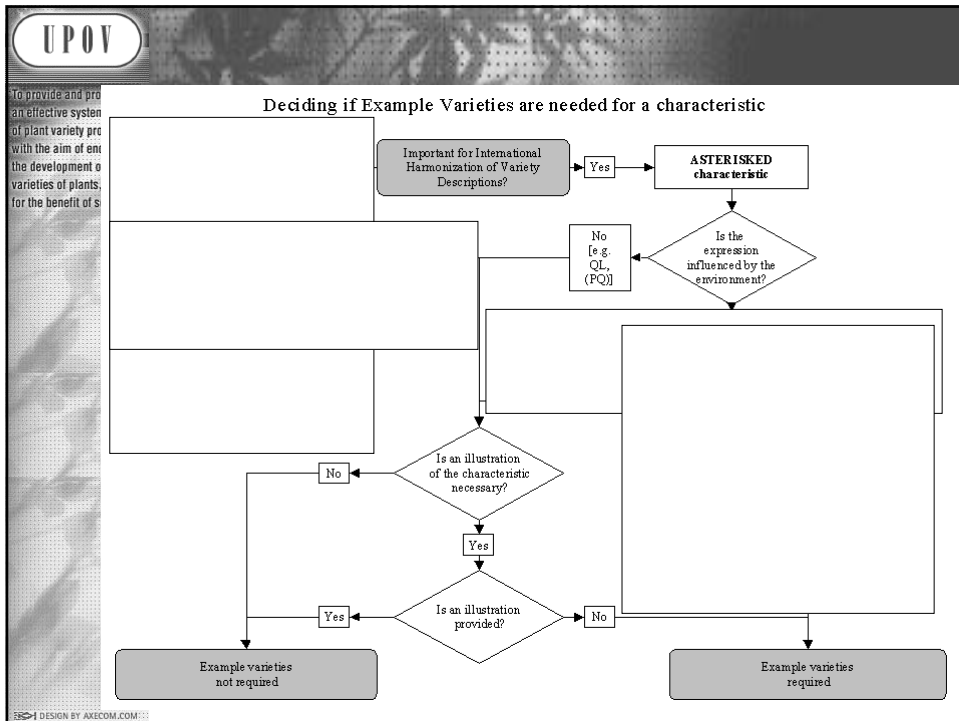
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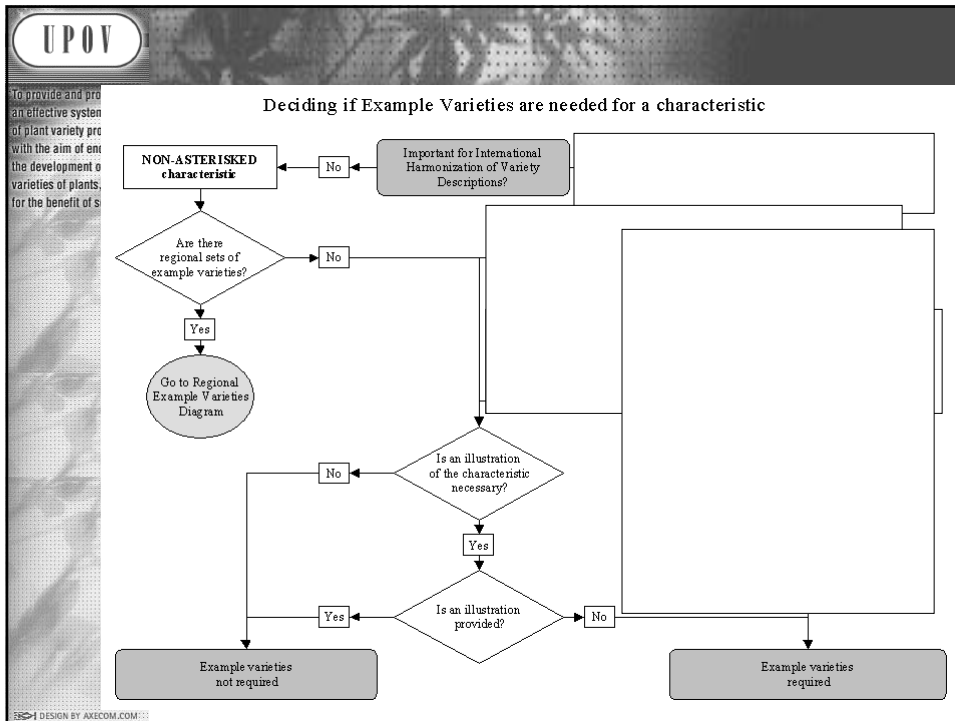
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## TGP/7: Guidance Notes

<b>GN 28</b>	<i>(TG Template: Chapter 6.4) – Example varieties</i> .....	64
1.	<i>Purpose of example varieties</i> .....	64
1.1	<i>Illustration of a characteristic</i> .....	64
1.2	<i>International Harmonization of Variety Descriptions</i> .....	64
2.	<i>Criteria for Example Varieties</i> .....	66
2.1	<i>Availability</i> .....	66
2.2	<i>Fluctuation of expression</i> .....	66
2.3	<i>Illustration of the range of expression within the variety collection</i> .....	67
2.4	<i>Minimizing the number</i> .....	67
2.5	<i>Agreement of interested experts</i> .....	67
3.	<i>Deciding where example varieties are needed for a characteristic</i> .....	68
4.	<i>Multiple sets of example varieties</i> .....	71
4.1	<i>Introduction</i> .....	71
4.2	<i>Regional sets of example varieties</i> .....	71
4.2.1	<i>Basis for regional sets of example varieties</i> .....	71
4.2.2	<i>Procedure for developing regional sets</i> .....	71
4.2.3	<i>Presentation</i> .....	71
4.3	<i>Different types of variety</i> .....	72
<b>GN 29</b>	<i>(TG Template: Chapter 8: Example varieties: names)</i> .....	73
1.	<i>Presentation of variety names</i> .....	73
2.	<i>Synonyms</i> .....	73

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# Exercise

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
<b>4.</b> <b>(*)</b> <b>(+)</b>	<b>Plant: height including flowers</b>	<b>Plante: hauteur, fleurs comprises</b>	<b>Pflanze: Höhe einschließlich Blüten</b>	<b>Planta: altura, incluidas las flores</b>	<b>?</b>	
<b>QN (a)</b>	short	basse	niedrig	corta		3
	medium	moyenne	mittel	media		5
	tall	élevée	hoch	larga		7

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
<b>1.</b> <b>(*)</b> <b>(+)</b>	<b>Plant: growth type</b>	<b>Plante: type de croissance</b>	<b>Pflanze: Wuchstyp</b>	<b>Planta: tipo de crecimiento</b>	<b>?</b>	
<b>QL (a)</b>	basal clusters	en amas à la base	basale Büschel	en racimos basales		1
	bushy	buissonnant	buschig	arbusivo		2

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
2. (+)	<b>Only varieties with bushy growth type:</b> Plant: predominant attitude of stems	<b>Variétés à type de croissance buissonnant</b> <b>uniquement:</b> Plante: port le plus fréquent des tiges	<b>Nur Sorten mit buschigem Wuchstyp:</b> Pflanze: vorwiegende Haltung der Triebe	<b>Sólo variedades con tipo de crecimiento arbustivo:</b> Planta: porte predominante de los tallos	?	
QN	(a) upright	dressées	aufrecht	erecto		1
	semi upright	demi-dressées	halbaufrecht	semierecto		3
	horizontal	horizontales	waagrecht	horizontal		5

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
5. (*) (+)	<b>Plant: width including flowers</b>	<b>Plante: largeur, fleurs comprises</b>	<b>Pflanze: Breite einschließlich Blüten</b>	<b>Planta: anchura, incluidas las flores</b>	?	
QN	(a) narrow	étroite	schmal	estrecha		3
	medium	moyenne	mittel	media		5
	broad	large	breit	ancha		7

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>9.</b> <b>(*)</b> <b>(+)</b>	<b>Leaf: margins</b>	<b>Feuille: bords</b>	<b>Blatt: Ränder</b>	<b>Hoja: borde del limbo</b>	<b>?</b>	
<b>QL</b>	<b>(a)</b> entire	entiers	ganzrandig	entero		1
	<b>(b)</b> divided	découpés	ingeschnitten	dividido		2

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>7.</b> <b>(*)</b> <b>(+)</b>	<b>Leaf: length</b>	<b>Feuille: longueur</b>	<b>Blatt: Länge</b>	<b>Hoja: longitud</b>	<b>?</b>	
<b>QN</b>	<b>(a)</b> short	courte	kurz	corta		3
	medium	moyenne	mittel	media		5
	long	longue	lang	larga		7
	very long	très longue	sehr lang	muy larga		9



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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
20. (+)	<b>Flower: bud color</b>	<b>Fleur: couleur du bouton</b>	<b>Blüte: Farbe der Knospe</b>	<b>Flor: color del botón floral</b>	<b>?</b>	
PQ (c)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte: (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

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	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
10. (* (+)	<b><u>Only varieties with entire leaf margins:</u></b> Leaf: shape	<b><u>Variétés à bords des feuilles entiers uniquement:</u></b> Feuille: forme	<b><u>Nur Sorten mit ganzrandigen Blättern:</u></b> Blatt: Form	<b><u>Sólo variedades con borde de limbo entero:</u></b> Hoja: forma	<b>?</b>	
PQ (a)	ovate	ovale	eiförmig	oval		1
(b)	linear	linéaire	linear	lineal		2
	oblong	oblongue	länglich	oblonga		3
	elliptic	elliptique	elliptisch	elíptica		4
	circular	circulaire	kreisförmig	circular		5
	oblanceolate	oblancéolée	verkehrt lanzettlich	obolanceolada		6
	obovate	obovale	verkehrt eiförmig	oboval		7
	spatulate	spatulée	spatelförmig	espatulada		8
	obtriangular	obtriangulaire	verkehrt dreieckig	obtriangular	9	

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# WHAT IS WRONG?

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<b>1.</b>	<b>Plant: time of flowering</b>	
	early 60 - 70 days	3
	medium 70 - 80 days	5
	late >80 days	7

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<b>1.</b>	<b>Cotyledon: surface</b>	
	smooth	1
	slightly wrinkled	2
	wrinkled	3

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<b>1.</b>	<b>Leaf blade: symmetry between the sides</b>	
	symmetric	1
	intermediate	2
	asymmetric	3

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1.	<b>Fruit bunch: uniformity</b>	
	low	3
	medium	5
	high	7
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1.	<b>Plant: natural height <u>at inflorescence emergence</u></b>	
	very short	1
	short	2
	medium	3
	tall	4
	very tall	5
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1.	<b>Plant: growth habit (at beginning of flowering)</b>	
	erect	3
	semi-erect	5
	prostrate	7
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1.	<b>Petiole: anthocyanin pigmentation</b>	
	absent	1
	present	2
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1.	<b>Leaf: shape of base</b>	
	acute	1
	obtuse	2
	cordate	3
	asymmetric	4
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1.	<b>Fruit: covering of calyx</b>	
	uncovered	3
	partially covered	5
	covered	7
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<b>1.</b>	<b>Fruit: ratio length/diameter</b>	
	very small	1
	very small to small	2
	small	3
	small to medium	4
	medium	5
	medium to large	6
	large	7
	large to very large	8
	very large	9
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<b>1.</b>	<b>Fruit: grooves</b>	
	absent or very weak	1
	present	9
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**1. Tree: distribution of flower buds**

predominantly on spurs	1
predominantly on one-year old shoots	2
equally on spurs and on one-year old shoots	3

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**1. Leaf blade: folding**

	absent (flat or slightly concave)	1
	concave	2
	asymmetrically folded	3
	twisted	4

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<b>1.</b>	<b>Corolla: length</b>	
QN	short	3
	medium	5
	long	7
<b>2.</b>	<b><u>Only varieties with long corolla:</u> Corolla: curvature</b>	
QN	curved upwards	3
	straight	5
	curved downwards	7

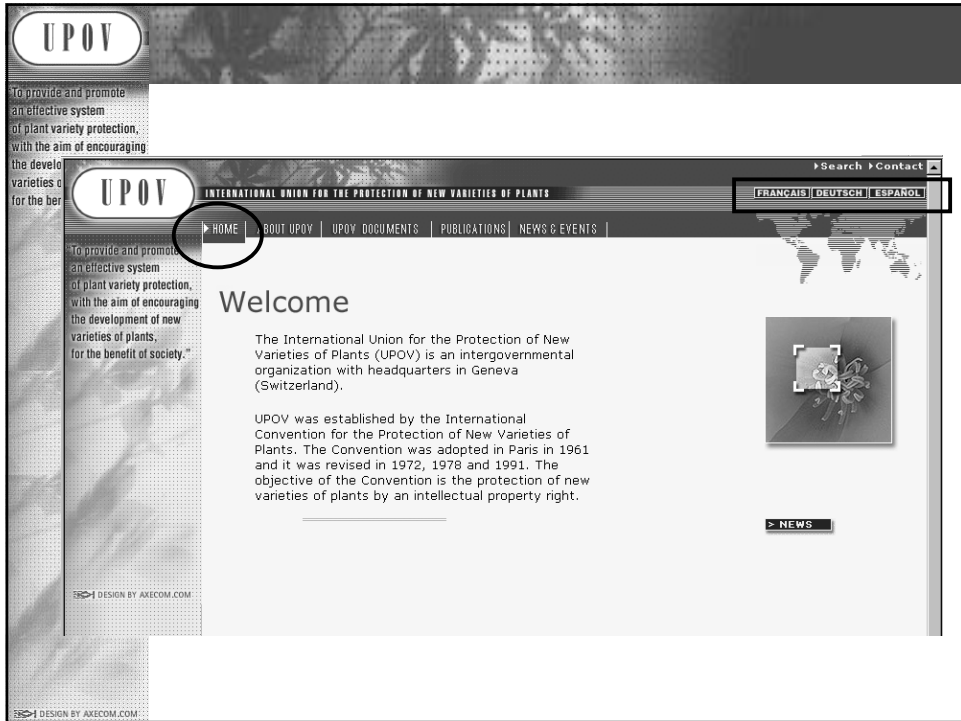
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**UPOV Website**  
<http://www.upov.int>  
 (e-mail: [upov.mail@upov.int](mailto:upov.mail@upov.int))

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

HOME
ABOUT UPOV
UPOV DOCUMENTS
PUBLICATIONS
NEWS & EVENTS



**Mission Statement**

**Introduction**

**UPOV Convention**

**Membership**

**UPOV Bodies**

**Legal Resources**

**Key Issues**

**Contact Us**


**Links**

**Training courses**

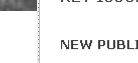
## MISSION STATEMENT

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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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."



INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

**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 26, 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 VI/5 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**

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HOME | ABOUT UPOV | **UPOV DOCUMENTS** | PUBLICATIONS | NEWS & EVENTS

Calendar  
Council  
Restricted area

[Council](#)  
[First restricted area](#)  
[Second restricted area](#)

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

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HOME | ABOUT UPOV | UPOV DOCUMENTS | **UPOV PUBLICATIONS** | NEWS & EVENTS

**UPOV Convention**  
List of Publications  
Gazette & Newsletter  
Laws & Treaties  
List of Taxa Protected  
Plant Variety  
Protection Statistics  
General Introduction to DUS  
TGP Documents  
Test Guidelines  
Practical Technical Knowledge  
Cooperation in Examination  
Plant Variety Database  
Training courses

**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, German, I = Italian, J = Japanese, P = Portuguese, R = Russian, S = Spanish

[221](#) (A) International Convention for the Protection of New Varieties of Plants, text of 1991 only  
(C)  
(D)  
(E)  
(F)  
(G)  
(I)  
(P)  
(R)  
(S)

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The screenshot shows the UPOV website interface. At the top left is the UPOV logo and its 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." Below this is a vertical sidebar with links for "News", "Calendar", and "Press Releases". The main header contains the UPOV logo and the full name "INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS". A navigation menu below the header includes "HOME", "ABOUT UPOV", "UPOV DOCUMENTS", "PUBLICATIONS", and "NEWS & EVENTS", with the latter being circled. The main content area displays a "NEWS" section with a link to an "Executive Summary" and a featured article: "UPOV DISTANCE LEARNING COURSE DL-205: 'Introduction to the UPOV System of Plant Variety Protection Under the UPOV Convention'". The article includes the dates "September/October 2006" and a link for "details on the course content, categories of inscription and fees (pdf)". A footer at the bottom left reads "DESIGN BY AXECOM.COM".

This screenshot shows the same UPOV website layout as above, but with the main content area replaced by a large, bold, black "THANK YOU" message centered on the page. The sidebar, header, and footer elements remain the same as in the previous screenshot.

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# AGENDA for the TWA MEETING

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I	<b>UPOV</b>	<b>E</b>
<small>TWA/35/1 Rev. ORIGINAL: English DATE: June 26, 2006</small>		
<b>INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS</b> GENEVA		
<b>TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS</b>		
<b>Thirty-Fifth Session</b> <b>Beijing, July 3 to 7, 2006</b>		
REVISED DRAFT AGENDA		
<ul style="list-style-type: none"><li>1 Opening of the session</li><li>2 Adoption of the agenda</li><li>3 Short reports on developments in plant variety protection<ul style="list-style-type: none"><li>(a) Reports from members and observers (oral reports by the participants)</li><li>(b) Reports on developments within UPOV (oral report by the Office of the Union)</li></ul></li><li>4 Molecular techniques<ul style="list-style-type: none"><li>(a) Developments in UPOV concerning the use of molecular techniques (document TWA/35/2)</li><li>(b) <i>Ad hoc</i> Crop Subgroups (oral report)</li></ul></li></ul>		

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5. TGP documents (documents TWA/35/3, TWA/35/3 Add., and TC/42/5 Annex II)

(a) TGP documents to which the Technical Committee has given highest priority:

TGP/4 Constitution and Management of Variety Collections (document TGP/4/1 Draft 7)

TGP/9 Examining Distinctness (document TGP/9/1 Draft 7)

TGP/10 Examining Uniformity (document TGP/10/1 Draft 4)

(b) Other TGP Documents:

TGP/8 Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability (document TGP/8/1 Draft 4)

TGP/12 Special Characteristics: Section 1: Development of Characteristics based on a Response to an External Factor (document TGP/12 Section 1 Draft 3)

TGP/13 Guidance for New Types and Species (document TGP/13/1 Draft 6)

TGP/14 Section 2: Glossary of Technical, Botanical and Statistical Terms Used in UPOV Documents: Botanical Terms: Plant shapes (including hair types) (document TGP/14.2.1(&.2) Draft 5)

6. UPOV Information Databases (document TWA/35/4)

7. Variety denominations (document TWA/35/5)

8. Project to consider the publication of variety descriptions (document TWA/35/6)

9. Drafters' Kit for Test Guidelines (document TWA/35/7)

10. "SELECT": A Method For Identification of Varieties to be Excluded from the Growing Trial (document TWA/35/9)

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11. Information on COY and off-type standards (documents TWA/35/10 and TWC/23/10)

12. Additional characteristics (documents TWA/35/8 and TGP/5: Section 10/1)

13. Discussion on draft Test Guidelines

(a) Coffee (document TG/COFFEE(proj.4))

(b) Common Millet\* (document TG/COM\_MIL(proj.4))

(c) *Festuca/Lolium* hybrids (*Festulolium*) (document TG/FESTL(proj.2))

(d) Grain Amaranth\* (document TG/AMARAN(proj.5))

(e) Maize (documents TG/2/7(proj.1) and TWA/35/11)

(f) Pearl Millet\* (document TG/PRL\_MIL(proj.3))

(g) Pea\* (Revision) (documents TG/7/10(proj.3) and TWA/35/11)

(h) Sesame (document TG/SESAME(proj.2))

(i) Sweet Potato (document TG/SWEETPOT(proj.1))

(j) Tea (document TG/TEA(proj.2))

14. Recommendations on draft Test Guidelines

15. Date and place of the next session

16. Future program

17. Adoption of report (if time permits)

18. Closing of the session

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